ISSN 0824-880X
ISSN 0830-1646

ACIDIC PRECIPITATION IN ONTARIO STUDY

ANNUAL STATISTICS OF CONCENTRATION AND DEPOSITION DAILY PRECIPITATION AND AIR MONITORING NETWORK 1986

ARB-038-88

APIOS-006-88

JULY 1988

Ontario
Ministry of the Environment

Jim Bradley
Minister

RE2125

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DAILY PRECIPITATION AND AIR MONITORING NETWORK

1986

Special Studies and Research Management Unit
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Ontario Ministry of the Environment
Air Resources Branch
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91-05837/

ACKNOWLEDGEMENT

This report was prepared by Diane Green of the APIOS Atmospheric Deposition and Chemistry Program. However, the data themselves are a product of the combined efforts of many individuals. Collection of samples was coordinated by Bill Trayling (in Northeastern Region), Steve Elliott (in Southeastern Region), Scott Kennedy (in Southwestern Region), Wim Smits (in Northwestern Region) and J. P. Varto (in Central Region). Sample handling was carried out by Mike Stevenson and overall coordination by Bill Bardswick at the Air Resources Branch. Chemical analayses were performed at the Laboratory Services and Applied Research Branch under the coordination of Frank Tomassini. Invaluable clerical and computer assistance were provided by Koshy Mathew and Joe Lamb, respectively, of C.C. and C. Computer Systems. All enquiries regarding the reported data should be directed to Neville Reid, Co-Ordinator, Atmospheric Deposition and Chemistry Program at (416) 965-1634.

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	Nithgrove	07	31
	North Easthope	03	32
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PART I

INTRODUCTION

INTRODUCTION

This report was prepared by Diane Green. The statistical summaries presented in this report pertain to the 1986 analytical results obtained from the Acidic Precipitation in Ontario Study (APIOS) daily precipitation and air monitoring network. The relevant data can be obtained on request from the Air Resources Branch of the Ministry. All available data are utilized in the calculations except results reported as being unreliable (i.e. results are identified as unreasonable values by using the validation procedures; detailed description of the validation procedures is available from the Ministry upon request) or approximate (i.e., inexact results are reported due to laboratory difficulties, such as may be encountered in calibration, or when the sample cannot be re-analyzed to confirm the reported values). In a very few cases, concentration levels exceeded the upper limit of the range of the chemical analysis. Rather than using the upper limit, a decision was made to exclude these values from the statistics generated in this report. If a reported value is labelled as <W, it is replaced by a "zero". W is the level which the analytical technique cannot distinguish from zero. Prior to 1986, if a level was recorded less than the detection limit T, a value corresponding to one half the detection limit was utilized for statistical calculations as reported in the statistical summaries. These values are no longer halved. Note that T is normally about ten times W, and values above the T criterion are considered to be precise and accurate. W corresponds to approximately one standard deviation of low level duplicates of real samples.

The reported precipitation gauge depth (standard rain gauge or nipher shielded snow gauge) is utilized in the calculation of deposition. If a rain gauge value is not available then the collected sample volume is converted to its equivalent precipitation depth and is used in the deposition calculation.

In the air concentration statistical summaries, "Nitric" represents "Nitric Acid" and "Totl NO_3" represents total nitrates calculated by the summation of particulate "Nitrate" and "Nitric Acid". The air filter measurement for sulfur dioxide includes a contribution from nylon-filter impregnated SO_4. In these reports the sulphur on nylon filters is interpreted as sulpur dioxide. However, it is possible that organic sulphur compounds also contribute to this loading. Methods do not currently exist to quantify this contribution in routine network operation.

The statistical summaries presented in Parts III to VII include the number of samples, mean (arithmetic/geometric), standard deviation (arithmetic/geometric), maximum, minimum and quartiles and volume weighted means using precipitation gauge depths where appropriate.

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INTRODUCTION

Le présent rapport a été préparé par Diane Green; il renferme les statistiques de 1986 tirées du réseau d'échantillonnage quotidien de l'air ambiant et des précipitations, réseau créé dans le cadre de l'Étude sur les précipitations acides en Ontario (APIOS). On peut obtenir les données pertinentes auprès de la Direction des ressources atmosphériques du ministère de l'Environnement. Toutes les données à notre disposition ont été utilisées dans les calculs, sauf celles jugées non fiables (c'est-à-dire les résultats qui, après vérification de leur validité, ont été signalés comme des valeurs excessives. On peut obtenir sur demande une description détaillée des procédés employés.) ou approximatives (c'est-à-dire les résultats qui, à cause de difficultés éprouvées en laboratoire, à la calibration, par exemple, ou lorsqu'il était impossible d'analyser à nouveau un échantillon pour confirmer la valeur indiquée, sont considérés comme inexacts). Dans quelques cas, les concentrations dépassaient le seuil supérieur fixé pour les analyses chimiques. Plutôt que d'utiliser le seuil supérieur, on a décidé d'exclure ces valeurs du présent rapport. Les résultats étiquetés <W sont remplacés par « zéro ». Dans le cadre d'une analyse technique, en effet, W correspond au niveau qu'il est impossible de distinguer du zéro. Avant 1986, si on mesurait un niveau inférieur au seuil de détection T, on utilisait aux fins d'analyse statistique une valeur correspondant à la moitié du seuil de détection, comme on l'indique d'ailleurs dans la présente étude. Ces valeurs ne sont plus coupées de moitié. Signalons que, normalement, T est environ dix fois supérieur à W et que les valeurs supérieures au seuil de détection T sont considérées comme justes et précises. W correspond approximativement à un écart-type des valeurs basses obtenues par la double analyse des échantillons.

La hauteur des précipitations mesurée à l'aide d'un pluviomètre ordinaire ou d'un niviomètre doté d'un écran de Nipher sert au

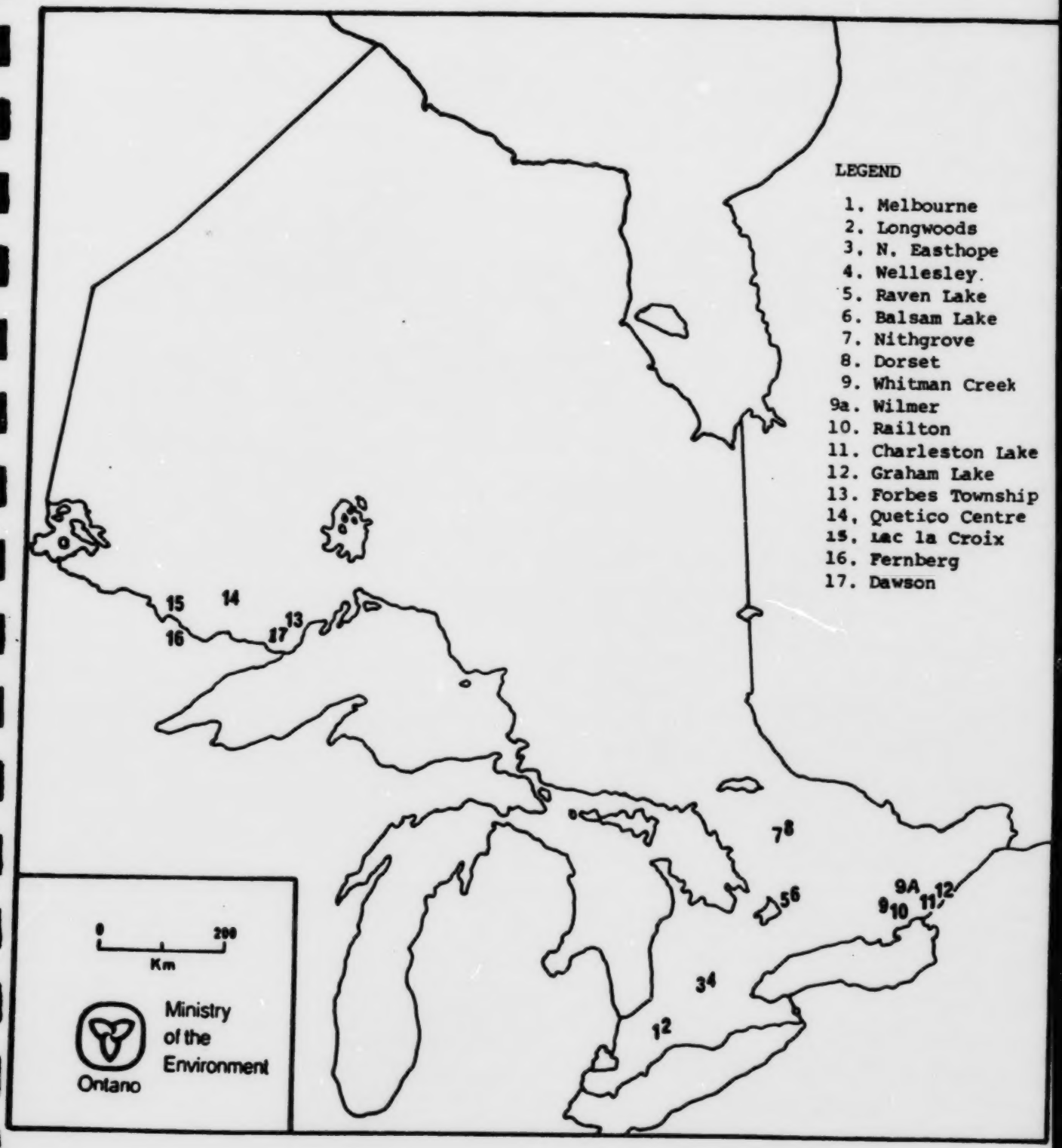
calcul des dépôts. Si on ne peut obtenir de données à partir du pluviomètre, on convertira le volume de l'échantillon en hauteur équivalente des précipitations, et cette nouvelle donnée servira alors au calcul des dépôts.

En ce qui concerne les données sur l'air ambiant, « Nitric » (nitrique) signifie « Nitric Acid » (acide nitrique) et « Totl NO_3 » (NO_3 total) représente l'ensemble des nitrates, c'est-à-dire la somme de « Nitrate » (particules de nitrate) et de « Nitric Acid » (acide nitrique). Une partie de l'anhydride sulfureux relevé sur les filtres provient des filtres de nylon imprégné de SO_4. Dans le présent rapport, les concentrations de soufre relevées sur le filtre de nylon sont considérées comme de l'anhydride sulfureux. Il est possible toutefois que des composés organiques sulfureux s'y soient mélangés. À l'heure actuelle, il n'existe pas de méthodes permettant, au cours des opérations de routine, de quantifier leur apport.

Voici les différentes catégories de statistiques figurant dans les sections III à VII : le nombre d'échantillons, les moyennes (arithmétiques/géométriques), les écarts-types (arithmétiques/géométriques), le maximum, le minimum, les quartiles et la moyenne pondérée des précipitations, calculée à partir de la hauteur mesurée par les pluviomètres, le cas échéant.

PART II

STATION DESCRIPTION AND LOCATION MAP


LEGEND
1. Melbourne
2. Longwoods
3. N. Easthope
4. Wellesley
5. Raven Lake
6. Balsam Lake
7. Nithgrove
8. Dorset
9. Whitman Creek
9a. Wilmer
10. Railton
11. Charleston Lake
12. Graham Lake
13. Forbes Township
14. Quetico Centre
15. Lac la Croix
16. Fernberg
17. Dawson
0
200
Km
Ministry of the Environment
Ontario

APIOS DAILY PRECIPITATION AND AIR MONITORING NETWORK SITE LOCATIONS *

AREA	MOE REGION	STATION NAME	ELEVATION (m above MSL)	LATITUDE (North)	LONGITUDE (West)	UTM COORDINATES (Northing)	(Easting)
London	Southwestern	Longwoods Conservations Area*	239	42°53'02"	81°28'50"	4747600	460700
		Melbourne	213	42°47'15"	81°33'23"	4737100	454500
		North Easthope	375	43°24'21"	80°53'35"	4805650	508650
Dorset	Central	Wellesley	344	43°28'13"	80°45'35"	4812700	519600
		Dorset Laboratory*	320	45°13'23"	78°55'49"	5009600	662450
		Nithgrove	325	45°12'01"	79°04'14"	5006800	651600
		Balsam Lake Provincial Park	259	44°37'35"	78°51'22"	4943500	670170
		Raven Lake	274	44°36'40"	78°54'43"	4941550	665700
Kingston	Southeastern	Charleston Lake Provincial Park*	92	44°29'54"	76°02'30"	4927500	417150
		Graham Lake	130	44°35'22"	75°51'44"	4937450	431550
		Railton	156	44°22'34"	76°35'33"	4914700	373200
		Wilmer	155	44°26'15"	76°31'45"	4921450	378250
		Whitman Creek	137	44°29'07"	76°49'19"	4927200	355100
Thunder Bay	Northwestern	Fernberg*	506	47°56'51"	91°29'26"	5311000	612000
		Lac La Croix	368	48°21'14"	92°12'32"	5355900	558400
		Forbes Township	324	48°34'58"	89°38'56"	5384150	304800
		Quetico Centre	420	48°24'44"	91°12'08"	5399750	632100
		Otter Island	204	48°06'50"	86°04'25"	5328750	569500
		Dawson	381	48°33'38"	89°38'60"	5380800	304700
Québec	N/A	Sutton	243	45°04'35"	72°40'35"	4995100	680950

* All sites monitor precipitation concentrations. Sites labelled (*) also monitor air concentrations.

PART III

SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY STATION

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BALSAM LAKE/DAILY/AEROCHEM 806

PERIOD OF REPORT : JAN 1,86 TO DEC 25,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES :	152	132	106	136	136	142	135
MAXIMUM :	93.1	94.2	6.9	7.4	0.3548	0.4510	19.00
MINIMUM :	0.1	3.8	3.6	3.4	0.0000	0.0102	0.15
RANGE :	93.0	90.4	3.3	3.9	0.3548	0.4408	18.85
ARITH. MEAN :	6.4	31.1	4.3	4.6	0.0603	0.0825	3.00
ARITH. STD. DEV :	10.1	20.0	0.5	0.8	0.0590	0.0687	2.67
GEOM. MEAN :	2.6	25.2	4.3	4.5	0.0281	0.0614	2.11
GEOM. STD. DEV. :	4.7	2.0	1.1	1.2	6.3155	2.1965	2.43
1ST QUARTILE :	1.2	16.4	4.1	4.1	0.0197	0.0355	1.27
2ND QUARTILE :	3.2	27.0	4.3	4.4	0.0447	0.0644	2.15
3RD QUARTILE :	9.0	40.9	4.5	4.7	0.0813	0.1045	3.80
VOL. WGT. MEAN :	######	24.5	######	######	0.0476	0.0688	2.39

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	135	120	134	120	123	123	120
MAXIMUM :	3.700	2.054	0.950	0.414	0.235	0.610	2.200
MINIMUM :	0.020	0.000	0.000	0.000	0.000	0.000	0.000
RANGE :	3.680	2.054	0.950	0.414	0.235	0.610	2.200
ARITH. MEAN :	0.704	0.379	0.195	0.044	0.033	0.092	0.377
ARITH. STD. DEV :	0.548	0.382	0.182	0.055	0.035	0.108	0.421
GEOM. MEAN :	0.506	0.246	0.150	0.033	0.045	0.061	0.209
GEOM. STD. DEV. :	2.491	2.778	2.359	2.846	2.529	2.788	3.528
1ST QUARTILE :	0.300	0.130	0.075	0.010	0.010	0.025	0.100
2ND QUARTILE :	0.595	0.260	0.145	0.025	0.025	0.050	0.243
3RD QUARTILE :	0.985	0.495	0.255	0.060	0.045	0.120	0.485
VOL. WGT. MEAN :	0.449	0.215	0.107	0.027	0.022	0.044	0.272

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
: INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

PERIOD OF REPORT : JAN 2,86 TO DEC 25,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES	132	106	23	119	119	124	119
MAXIMUM	58.8	100.0	6.1	6.9	0.5129	0.5650	16.50
MINIMUM	0.2	4.0	3.6	3.3	0.0001	0.0151	0.10
RANGE	58.6	96.0	2.5	3.6	0.5127	0.5499	16.40
ARITH. MEAN	8.1	31.2	4.4	4.4	0.0805	0.1110	3.54
ARITH. STD. DEV	10.1	20.0	0.6	0.7	0.0870	0.1002	3.16
GEOM. MEAN	3.6	24.8	4.3	4.3	0.0408	0.0796	2.38
GEOM. STD. DEV.	4.3	2.1	1.1	1.1	4.5025	2.2632	2.63
1ST QUARTILE	1.4	14.1	4.0	4.0	0.0234	0.0417	1.27
2ND QUARTILE	5.0	25.9	4.2	4.3	0.0501	0.0801	2.55
3RD QUARTILE	10.3	44.9	4.7	4.6	0.1035	0.1395	4.57
VOL. WGT. MEAN	******	29.1	******	******	0.0617	0.0974	2.74

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES	117	108	116	110	112	111	114
MAXIMUM	3.500	1.820	1.230	0.365	0.895	0.795	1.600
MINIMUM	0.000	0.010	0.000	0.000	0.000	0.000	0.000
RANGE	3.500	1.810	1.230	0.365	0.895	0.795	1.600
ARITH. MEAN	0.694	0.313	0.219	0.036	0.038	0.071	0.260
ARITH. STD. DEV	0.642	0.363	0.237	0.050	0.104	0.109	0.297
GEOM. MEAN	0.490	0.177	0.142	0.023	0.034	0.049	0.130
GEOM. STD. DEV.	2.636	3.061	2.676	2.888	2.974	2.861	4.523
1ST QUARTILE	0.240	0.090	0.060	0.005	0.005	0.020	0.045
2ND QUARTILE	0.455	0.180	0.130	0.020	0.017	0.040	0.190
3RD QUARTILE	0.960	0.395	0.295	0.040	0.030	0.065	0.345
VOL. WGT. MEAN	0.426	0.184	0.112	0.019	0.021	0.037	0.178

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DAWSON/DAILY/AEROCHEM./6131

PERIOD OF REPORT : NOV 2,86 TO DEC 8,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES	10	4	0	4	4	4	4
MAXIMUM	39.2	26.5	******	5.4	0.0537	0.0754	2.15
MINIMUM	0.1	7.3	******	4.3	0.0043	0.0244	0.35
RANGE	39.1	19.2	******	1.1	0.0494	0.0510	1.80
ARITH. MEAN	8.6	13.6	******	4.9	0.0206	0.0406	1.09
ARITH. STD. DEV	11.1	8.9	******	0.5	0.0225	0.0236	0.77
GEOM. MEAN	4.3	11.8	******	4.9	0.0133	0.0365	0.88
GEOM. STD. DEV.	4.7	1.8	******	1.1	2.9021	1.6600	2.14
1ST QUARTILE	3.1	7.7	******	4.5	0.0067	0.0259	0.55
2ND QUARTILE	5.1	10.3	******	4.9	0.0121	0.0313	0.92
3RD QUARTILE	8.2	19.5	******	5.2	0.0344	0.0553	1.63
VOL. WGT. MEAN	******	21.4	******	******	0.0404	0.0615	1.74

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES	4	4	4	4	4	4	4
MAXIMUM	0.500	0.220	0.296	0.034	0.061	0.242	0.280
MINIMUM	0.081	0.080	0.060	0.015	0.015	0.030	0.007
RANGE	0.419	0.140	0.236	0.019	0.046	0.212	0.273
ARITH. MEAN	0.293	0.142	0.124	0.023	0.030	0.092	0.167
ARITH. STD. DEV	0.185	0.073	0.115	0.010	0.021	0.101	0.130
GEOM. MEAN	0.238	0.128	0.096	0.022	0.026	0.064	0.087
GEOM. STD. DEV.	2.241	1.722	2.144	1.547	1.827	2.506	5.779
1ST QUARTILE	0.145	0.080	0.060	0.015	0.017	0.037	0.061
2ND QUARTILE	0.295	0.134	0.070	0.023	0.022	0.047	0.190
3RD QUARTILE	0.440	0.204	0.188	0.032	0.043	0.146	0.272
VOL. WGT. MEAN	0.426	0.110	0.081	0.019	0.020	0.051	0.243

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
****** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/DAILY/AEROCHEM #08

PERIOD OF REPORT : JAN 1,86 TO DEC 29,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES	182	152	108	153	153	157	152
MAXIMUM	45.4	91.2	5.6	6.4	0.1995	0.2780	9.75
MINIMUM	0.0	2.9	3.7	3.7	0.0004	0.0139	0.10
RANGE	45.4	88.3	2.0	2.7	0.1991	0.2641	9.65
ARITH. MEAN	5.9	29.6	4.4	4.5	0.0525	0.0784	2.55
ARITH. STD. DEV	8.1	20.8	0.4	0.5	0.0436	0.0533	2.15
GEOM. MEAN	2.4	22.3	4.4	4.4	0.0342	0.0623	1.66
GEOM. STD. DEV.	4.9	2.2	1.1	1.1	2.9032	1.9998	2.79
1ST QUARTILE	1.0	11.3	4.1	4.1	0.0174	0.0353	0.75
2ND QUARTILE	2.8	25.2	4.3	4.4	0.0389	0.0591	1.75
3RD QUARTILE	7.4	40.9	4.7	4.8	0.0785	0.1065	3.85
VOL. WGT. MEAN	******	21.6	******	******	0.0386	0.0600	1.98

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES	153	138	152	137	141	141	146
MAXIMUM	2.260	1.390	1.218	0.300	0.756	0.880	1.827
MINIMUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RANGE	2.260	1.390	1.218	0.300	0.756	0.880	1.827
ARITH. MEAN	0.643	0.252	0.190	0.040	0.044	0.071	0.354
ARITH. STD. DEV	0.523	0.286	0.204	0.052	0.081	0.117	0.362
GEOM. MEAN	0.422	0.138	0.145	0.039	0.049	0.045	0.191
GEOM. STD. DEV.	2.909	3.448	2.560	3.012	2.842	3.042	3.868
1ST QUARTILE	0.210	0.040	0.050	0.005	0.010	0.015	0.066
2ND QUARTILE	0.550	0.140	0.130	0.020	0.025	0.040	0.212
3RD QUARTILE	0.916	0.325	0.245	0.050	0.052	0.080	0.522
VOL. WGT. MEAN	0.399	0.154	0.101	0.024	0.022	0.035	0.259

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY/AEROCHEM #16

PERIOD OF REPORT : FEB 7,86 TO DEC 30,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES :	70	41	0	36	36	38	41
MAXIMUM :	27.2	67.5	******	6.1	0.0641	0.1902	9.51
MINIMUM :	0.1	2.0	******	4.2	0.0007	0.0164	0.15
RANGE :	27.1	65.5	******	1.9	0.0634	0.1738	9.36
ARITH. MEAN :	3.3	12.2	******	5.1	0.0135	0.0372	1.33
ARITH. STD. DEV :	4.7	11.9	******	0.5	0.0133	0.0301	1.79
GEOM. MEAN :	1.2	9.5	******	5.1	0.0080	0.0315	0.84
GEOM. STD. DEV. :	5.3	1.9	******	1.1	3.1883	1.6761	2.42
1ST QUARTILE :	0.2	6.3	******	4.7	0.0035	0.0201	0.44
2ND QUARTILE :	1.8	8.2	******	5.0	0.0111	0.0306	0.77
3RD QUARTILE :	3.9	13.7	******	5.5	0.0180	0.0372	1.24
VOL. WGT. MEAN :	******	8.2	******	******	0.0089	0.0269	0.82

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	41	37	41	37	36	39	36
MAXIMUM :	1.697	1.939	0.770	0.311	0.787	0.590	0.682
MINIMUM :	0.000	0.010	0.000	0.000	0.000	0.005	0.000
RANGE :	1.697	1.929	0.770	0.311	0.787	0.585	0.682
ARITH. MEAN :	0.283	0.261	0.134	0.041	0.056	0.102	0.166
ARITH. STD. DEV :	0.311	0.336	0.164	0.059	0.134	0.124	0.175
GEOM. MEAN :	0.218	0.161	0.115	0.031	0.029	0.062	0.131
GEOM. STD. DEV. :	2.167	2.790	2.249	2.683	3.224	2.709	3.670
1ST QUARTILE :	0.135	0.100	0.050	0.012	0.010	0.027	0.032
2ND QUARTILE :	0.220	0.155	0.081	0.022	0.017	0.057	0.103
3RD QUARTILE :	0.305	0.275	0.110	0.037	0.052	0.131	0.250
VOL. WGT. MEAN :	0.183	0.167	0.071	0.022	0.025	0.054	0.200

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
****** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FORBES TWSP/DAILY/AEROCHEM #13

PERIOD OF REPORT : JAN 13,86 TO OCT 16,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES	63	52	0	51	51	52	52
MAXIMUM	37.8	38.5	******	7.0	0.0741	0.1030	5.10
MINIMUM	0.1	4.2	******	4.1	0.0001	0.0137	0.20
RANGE	37.7	34.3	******	2.9	0.0740	0.0893	4.90
ARITH. MEAN	8.5	11.6	******	5.2	0.0132	0.0322	1.25
ARITH. STD. DEV	8.0	7.0	******	0.7	0.0138	0.0165	0.95
GEOM. MEAN	3.9	10.0	******	5.2	0.0061	0.0291	0.96
GEOM. STD. DEV.	5.5	1.7	******	1.1	4.9087	1.5629	2.12
1ST QUARTILE	2.5	6.2	******	4.7	0.0017	0.0213	0.53
2ND QUARTILE	5.6	10.0	******	5.1	0.0087	0.0286	1.00
3RD QUARTILE	13.1	14.9	******	5.6	0.0202	0.0412	1.55
VOL. WGT. MEAN	******	10.4	******	******	0.0111	0.0296	1.17

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES	52	49	52	49	49	49	51
MAXIMUM	0.940	1.600	0.250	0.175	0.070	0.150	0.810
MINIMUM	0.060	0.020	0.000	0.000	0.000	0.005	0.000
RANGE	0.880	1.580	0.250	0.175	0.070	0.145	0.810
ARITH. MEAN	0.251	0.306	0.082	0.031	0.022	0.048	0.208
ARITH. STD. DEV	0.179	0.291	0.056	0.033	0.016	0.036	0.188
GEOM. MEAN	0.204	0.209	0.100	0.025	0.018	0.035	0.155
GEOM. STD. DEV.	1.897	2.475	1.803	2.556	2.142	2.331	2.749
1ST QUARTILE	0.130	0.100	0.050	0.010	0.010	0.020	0.060
2ND QUARTILE	0.195	0.240	0.080	0.020	0.020	0.037	0.157
3RD QUARTILE	0.330	0.350	0.120	0.040	0.027	0.062	0.267
VOL. WGT. MEAN	0.219	0.280	0.069	0.027	0.018	0.038	0.215

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY/AEROCHEM #12

PERIOD OF REPORT : JAN 2,86 TO NOV 8,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES :	85	74	13	74	74	80	77
MAXIMUM :	52.2	93.4	4.7	6.5	0.3981	0.3970	19.75
MINIMUM :	0.1	6.4	3.7	3.4	0.0003	0.0147	0.25
RANGE :	52.1	87.0	0.9	3.1	0.3978	0.3823	19.50
ARITH. MEAN :	10.7	32.1	4.3	4.3	0.0717	0.0915	3.37
ARITH. STD. DEV :	10.2	19.6	0.3	0.5	0.0688	0.0716	2.84
GEOM. MEAN :	6.0	26.7	4.2	4.3	0.0471	0.0720	2.59
GEOM. STD. DEV. :	3.7	1.9	1.1	1.1	3.0385	1.9996	2.11
1ST QUARTILE :	3.1	16.9	4.1	4.1	0.0302	0.0492	1.70
2ND QUARTILE :	7.8	27.1	4.2	4.3	0.0513	0.0709	2.50
3RD QUARTILE :	14.0	43.9	4.4	4.5	0.0871	0.1140	4.35
VOL. WGT. MEAN :	******	31.4	******	******	0.0628	0.0826	3.16

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	76	73	77	74	74	74	76
MAXIMUM :	2.190	1.460	0.750	0.335	0.455	0.375	2.170
MINIMUM :	0.060	0.010	0.020	0.005	0.000	0.005	0.040
RANGE :	2.130	1.450	0.730	0.330	0.455	0.370	2.130
ARITH. MEAN :	0.628	0.289	0.159	0.040	0.041	0.065	0.399
ARITH. STD. DEV :	0.481	0.306	0.143	0.057	0.057	0.060	0.335
GEOM. MEAN :	0.472	0.179	0.117	0.024	0.030	0.047	0.299
GEOM. STD. DEV. :	2.196	2.817	2.192	2.623	2.417	2.209	2.196
1ST QUARTILE :	0.275	0.105	0.075	0.010	0.015	0.030	0.200
2ND QUARTILE :	0.480	0.180	0.100	0.025	0.025	0.047	0.305
3RD QUARTILE :	0.845	0.305	0.190	0.045	0.045	0.070	0.520
VOL. WGT. MEAN :	0.492	0.219	0.119	0.032	0.031	0.047	0.327

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY/AEROCHEM #02

PERIOD OF REPORT : JAN 2,86 TO DEC 25,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES :	144	131	76	127	127	140	136
MAXIMUM :	45.2	75.7	6.8	7.8	0.2692	0.3410	18.50
MINIMUM :	0.2	6.4	3.8	3.6	0.0000	0.0109	0.50
RANGE :	45.0	69.3	3.1	4.2	0.2691	0.3301	18.00
ARITH. MEAN :	6.7	30.6	4.6	5.0	0.0443	0.0673	3.88
ARITH. STD. DEV :	7.5	16.9	0.7	1.1	0.0497	0.0582	2.86
GEOM. MEAN :	3.8	26.1	4.6	4.9	0.0107	0.0478	2.99
GEOM. STD. DEV. :	3.1	1.8	1.1	1.2	12.9078	2.3180	2.12
1ST QUARTILE :	1.6	17.4	4.2	4.2	0.0026	0.0221	1.82
2ND QUARTILE :	4.2	27.0	4.4	4.5	0.0309	0.0506	3.10
3RD QUARTILE :	9.2	38.9	4.8	5.6	0.0638	0.0901	4.97
VOL. WGT. MEAN :	******	26.4	******	******	0.0422	0.0657	3.12

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	134	114	134	119	120	122	129
MAXIMUM :	2.763	4.180	1.971	0.545	0.240	0.705	2.700
MINIMUM :	0.060	0.050	0.020	0.000	0.000	0.000	0.040
RANGE :	2.703	4.130	1.951	0.545	0.240	0.705	2.660
ARITH. MEAN :	0.762	1.013	0.303	0.090	0.072	0.095	0.505
ARITH. STD. DEV :	0.560	0.951	0.269	0.102	0.053	0.105	0.432
GEOM. MEAN :	0.575	0.637	0.218	0.058	0.058	0.074	0.364
GEOM. STD. DEV. :	2.222	2.820	2.327	2.862	2.245	2.395	2.335
1ST QUARTILE :	0.390	0.320	0.120	0.027	0.030	0.040	0.212
2ND QUARTILE :	0.591	0.660	0.240	0.055	0.060	0.065	0.390
3RD QUARTILE :	1.090	1.475	0.400	0.110	0.095	0.105	0.635
VOL. WGT. MEAN :	0.520	0.620	0.182	0.052	0.046	0.062	0.384

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY/AEROCHEM #01

PERIOD OF REPORT : JAN 2,86 TO DEC 25,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES	144	118	69	120	120	124	121
MAXIMUM	28.5	97.2	6.7	7.5	0.2399	0.2880	16.25
MINIMUM	0.1	8.2	3.7	3.6	0.0000	0.0123	0.55
RANGE	28.4	89.0	2.9	3.8	0.2398	0.2757	15.70
ARITH. MEAN	6.1	35.0	4.5	4.7	0.0536	0.0803	4.22
ARITH. STD. DEV	6.3	18.8	0.6	1.0	0.0501	0.0575	2.77
GEOM. MEAN	3.4	30.4	4.5	4.6	0.0198	0.0626	3.43
GEOM. STD. DEV.	3.3	1.7	1.1	1.2	9.2034	2.0861	1.95
1ST QUARTILE	1.4	19.3	4.1	4.1	0.0166	0.0375	2.13
2ND QUARTILE	4.0	30.4	4.4	4.4	0.0407	0.0666	3.52
3RD QUARTILE	8.2	45.1	4.6	4.8	0.0804	0.1095	5.30
VOL. WGT. MEAN	******	30.2	******	******	0.0520	0.0768	3.29

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES	121	103	120	106	107	109	114
MAXIMUM	2.950	4.140	2.270	0.850	0.533	0.975	2.750
MINIMUM	0.120	0.010	0.000	0.000	0.000	0.000	0.000
RANGE	2.830	4.130	2.270	0.850	0.533	0.975	2.750
ARITH. MEAN	0.827	0.792	0.326	0.090	0.080	0.103	0.565
ARITH. STD. DEV	0.576	0.842	0.321	0.107	0.096	0.129	0.493
GEOM. MEAN	0.653	0.452	0.223	0.061	0.071	0.074	0.401
GEOM. STD. DEV.	2.036	3.219	2.579	2.990	2.590	2.683	2.451
1ST QUARTILE	0.375	0.215	0.120	0.025	0.025	0.030	0.223
2ND QUARTILE	0.660	0.495	0.250	0.062	0.050	0.065	0.410
3RD QUARTILE	1.155	1.090	0.385	0.135	0.100	0.118	0.745
VOL. WGT. MEAN	0.570	0.466	0.198	0.054	0.054	0.067	0.398

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NITHGROVE/DAILY/AEROCHEM #07

PERIOD OF REPORT : DEC 31,85 TO DEC 26,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES	156	145	107	144	144	146	144
MAXIMUM	51.0	104.9	7.0	7.3	0.1828	0.2314	10.40
MINIMUM	0.0	2.8	3.7	3.7	0.0000	0.0141	0.15
RANGE	51.0	102.1	3.3	3.6	0.1828	0.2173	10.25
ARITH. MEAN	6.6	30.7	4.4	4.6	0.0526	0.0768	2.69
ARITH. STD. DEV	8.5	21.5	0.5	0.7	0.0448	0.0514	2.23
GEOM. MEAN	3.1	23.3	4.4	4.5	0.0278	0.0608	1.80
GEOM. STD. DEV.	4.2	2.2	1.1	1.1	4.6983	2.0356	2.66
1ST QUARTILE	1.6	13.3	4.1	4.1	0.0143	0.0353	0.88
2ND QUARTILE	3.6	26.7	4.4	4.4	0.0412	0.0645	2.05
3RD QUARTILE	7.5	41.3	4.7	4.8	0.0851	0.1085	3.90
VOL. WGT. MEAN	******	23.3	******	******	0.0408	0.0624	2.15

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES	144	127	144	129	131	131	136
MAXIMUM	2.595	1.750	0.760	0.355	0.375	0.320	3.000
MINIMUM	0.020	0.000	0.000	0.000	0.000	0.000	0.010
RANGE	2.575	1.750	0.760	0.355	0.375	0.320	2.990
ARITH. MEAN	0.675	0.254	0.182	0.040	0.060	0.058	0.451
ARITH. STD. DEV	0.524	0.285	0.151	0.056	0.061	0.057	0.458
GEOM. MEAN	0.451	0.149	0.149	0.031	0.043	0.045	0.266
GEOM. STD. DEV.	2.846	3.213	2.267	2.944	2.522	2.438	3.163
1ST QUARTILE	0.220	0.065	0.080	0.008	0.022	0.020	0.130
2ND QUARTILE	0.595	0.160	0.140	0.020	0.040	0.040	0.313
3RD QUARTILE	0.965	0.300	0.250	0.040	0.075	0.075	0.625
VOL. WGT. MEAN	0.441	0.167	0.112	0.025	0.034	0.037	0.320

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

PERIOD OF REPORT : JAN 1,86 TO DEC 26,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES :	150	129	68	132	132	134	133
MAXIMUM :	95.0	91.5	6.7	7.7	0.2512	0.3460	14.00
MINIMUM :	0.1	4.9	3.7	3.6	0.0000	0.0133	0.25
RANGE :	94.9	86.6	3.0	4.1	0.2512	0.3327	13.75
ARITH. MEAN :	7.8	30.9	4.6	4.7	0.0514	0.0792	3.46
ARITH. STD. DEV :	11.0	17.8	0.7	1.0	0.0465	0.0584	2.65
GEOM. MEAN :	3.8	26.0	4.5	4.6	0.0185	0.0614	2.52
GEOM. STD. DEV. :	3.7	1.9	1.1	1.2	9.7974	2.1077	2.37
1ST QUARTILE :	1.5	17.8	4.1	4.1	0.0192	0.0408	1.65
2ND QUARTILE :	4.6	25.9	4.4	4.4	0.0442	0.0703	2.85
3RD QUARTILE :	9.9	40.9	4.7	4.7	0.0724	0.1035	4.65
VOL. WGT. MEAN :	******	29.9	******	******	0.0516	0.0773	3.09

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	133	118	133	120	120	121	126
MAXIMUM :	2.490	2.043	1.209	1.070	0.455	0.525	2.850
MINIMUM :	0.020	0.000	0.000	0.000	0.000	0.000	0.010
RANGE :	2.470	2.043	1.209	1.070	0.455	0.525	2.840
ARITH. MEAN :	0.700	0.444	0.235	0.101	0.039	0.067	0.530
ARITH. STD. DEV :	0.487	0.433	0.204	0.142	0.052	0.084	0.476
GEOM. MEAN :	0.541	0.282	0.180	0.057	0.041	0.055	0.368
GEOM. STD. DEV. :	2.189	2.832	2.226	3.133	2.541	2.622	2.518
1ST QUARTILE :	0.335	0.150	0.100	0.025	0.010	0.020	0.192
2ND QUARTILE :	0.563	0.280	0.180	0.050	0.027	0.040	0.405
3RD QUARTILE :	0.940	0.595	0.320	0.105	0.045	0.077	0.697
VOL. WGT. MEAN :	0.525	0.299	0.157	0.061	0.027	0.044	0.403

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
: INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

PERIOD OF REPORT : JAN 1,86 TO DEC 26,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES :	103	75	0	69	69	77	75
MAXIMUM :	25.0	57.9	******	6.9	0.1175	0.1390	7.55
MINIMUM :	0.1	2.9	******	3.9	0.0001	0.0144	0.15
RANGE :	24.9	55.0	******	3.0	0.1174	0.1246	7.40
ARITH. MEAN :	6.9	11.4	******	5.2	0.0140	0.0319	1.21
ARITH. STD. DEV :	7.1	9.3	******	0.6	0.0185	0.0197	1.28
GEOM. MEAN :	3.3	9.3	******	5.1	0.0068	0.0285	0.84
GEOM. STD. DEV. :	4.7	1.8	******	1.1	4.1754	1.5499	2.32
1ST QUARTILE :	1.6	6.1	******	4.7	0.0033	0.0207	0.55
2ND QUARTILE :	4.0	8.6	******	5.0	0.0095	0.0269	0.82
3RD QUARTILE :	9.3	12.8	******	5.4	0.0184	0.0360	1.27
VOL. WGT. MEAN :	******	9.6	******	******	0.0109	0.0293	1.06

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	75	70	73	70	71	70	72
MAXIMUM :	1.080	0.900	0.510	0.165	0.900	0.270	1.650
MINIMUM :	0.000	0.010	0.000	0.000	0.000	0.010	0.000
RANGE :	1.080	0.890	0.510	0.165	0.900	0.260	1.650
ARITH. MEAN :	0.249	0.208	0.109	0.034	0.056	0.063	0.236
ARITH. STD. DEV :	0.199	0.186	0.093	0.034	0.110	0.053	0.281
GEOM. MEAN :	0.196	0.142	0.091	0.025	0.035	0.047	0.139
GEOM. STD. DEV. :	2.175	2.589	2.072	2.447	2.754	2.125	3.514
1ST QUARTILE :	0.115	0.080	0.045	0.015	0.015	0.025	0.065
2ND QUARTILE :	0.200	0.150	0.080	0.025	0.030	0.045	0.168
3RD QUARTILE :	0.340	0.255	0.135	0.042	0.047	0.090	0.275
VOL. WGT. MEAN :	0.211	0.167	0.074	0.026	0.040	0.045	0.252

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAILTON/DAILY/AEROCHEM #10

PERIOD OF REPORT : DEC 29,85 TO DEC 25,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES	93	82	18	88	88	88	86
MAXIMUM	54.2	95.5	5.6	7.3	0.4266	0.4790	18.50
MINIMUM	0.5	4.6	3.6	3.4	0.0000	0.0135	0.30
RANGE	53.7	90.9	2.0	4.0	0.4265	0.4655	18.20
ARITH. MEAN	11.3	32.9	4.3	4.4	0.0723	0.0978	3.53
ARITH. STD. DEV	11.7	21.0	0.5	0.7	0.0704	0.0780	2.91
GEOM. MEAN	6.3	26.9	4.3	4.4	0.0405	0.0758	2.58
GEOM. STD. DEV.	3.3	1.9	1.1	1.1	4.5724	2.0588	2.34
1ST QUARTILE	2.6	17.2	4.1	4.1	0.0264	0.0458	1.55
2ND QUARTILE	7.5	29.0	4.2	4.3	0.0550	0.0769	2.85
3RD QUARTILE	15.4	40.4	4.4	4.6	0.0842	0.1125	4.35
VOL. WGT. MEAN	######	30.0	######	######	0.0594	0.0825	2.91

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES	86	80	88	80	81	81	84
MAXIMUM	2.660	0.980	0.780	0.200	0.345	0.335	1.150
MINIMUM	0.020	0.000	0.000	0.000	0.000	0.000	0.025
RANGE	2.640	0.980	0.780	0.200	0.345	0.335	1.125
ARITH. MEAN	0.644	0.252	0.191	0.033	0.046	0.060	0.383
ARITH. STD. DEV	0.526	0.253	0.167	0.033	0.053	0.061	0.281
GEOM. MEAN	0.464	0.160	0.142	0.029	0.047	0.042	0.277
GEOM. STD. DEV.	2.422	3.206	2.286	2.641	2.566	2.541	2.438
1ST QUARTILE	0.270	0.055	0.080	0.010	0.015	0.020	0.165
2ND QUARTILE	0.540	0.150	0.145	0.020	0.030	0.042	0.303
3RD QUARTILE	0.815	0.370	0.235	0.047	0.055	0.072	0.552
VOL. WGT. MEAN	0.478	0.151	0.121	0.022	0.028	0.040	0.316

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
: INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY/AEROCHEM 805

PERIOD OF REPORT : JAN 1,86 TO DEC 29,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES :	184	143	98	143	143	144	144
MAXIMUM :	95.0	229.9	6.0	6.9	0.4266	0.5659	14.96
MINIMUM :	0.1	2.9	3.6	3.4	0.0001	0.0149	0.00
RANGE :	94.9	227.0	2.4	3.5	0.4265	0.5510	14.96
ARITH. MEAN :	5.8	31.4	4.4	4.5	0.0605	0.0878	2.81
ARITH. STD. DEV :	9.8	26.8	0.4	0.7	0.0663	0.0789	2.53
GEOM. MEAN :	2.2	23.3	4.3	4.5	0.0305	0.0662	1.88
GEOM. STD. DEV. :	4.6	2.2	1.1	1.1	4.5622	2.1136	2.64
1ST QUARTILE :	0.8	14.8	4.1	4.1	0.0177	0.0422	1.11
2ND QUARTILE :	2.8	24.3	4.3	4.4	0.0389	0.0686	1.92
3RD QUARTILE :	7.0	42.6	4.5	4.7	0.0804	0.1045	3.60
VOL. WGT. MEAN :	******	23.1	******	******	0.0457	0.0663	2.16

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	143	121	147	122	123	124	130
MAXIMUM :	7.382	2.230	1.940	0.383	0.300	1.100	3.150
MINIMUM :	0.040	0.000	0.000	0.000	0.000	0.000	0.005
RANGE :	7.342	2.230	1.940	0.383	0.300	1.100	3.145
ARITH. MEAN :	0.677	0.330	0.206	0.042	0.036	0.069	0.439
ARITH. STD. DEV :	0.791	0.405	0.259	0.064	0.040	0.112	0.571
GEOM. MEAN :	0.428	0.187	0.140	0.031	0.034	0.041	0.213
GEOM. STD. DEV. :	2.712	3.255	2.499	3.018	2.438	2.980	3.758
1ST QUARTILE :	0.220	0.090	0.070	0.008	0.010	0.015	0.098
2ND QUARTILE :	0.460	0.185	0.135	0.020	0.025	0.045	0.245
3RD QUARTILE :	0.855	0.390	0.205	0.045	0.047	0.081	0.478
VOL. WGT. MEAN :	0.416	0.173	0.103	0.022	0.021	0.034	0.273

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SUTTON/DAILY/AEROCHEM./7011

PERIOD OF REPORT : OCT 8,86 TO DEC 31,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES :	46	30	0	31	31	31	31
MAXIMUM :	28.3	75.3	******	6.0	0.2884	0.2930	7.05
MINIMUM :	0.1	3.1	******	3.5	0.0011	0.0158	0.10
RANGE :	28.2	72.2	******	2.4	0.2873	0.2772	6.95
ARITH. MEAN :	5.2	26.0	******	4.5	0.0547	0.0793	2.24
ARITH. STD. DEV :	7.4	18.1	******	0.5	0.0570	0.0565	1.93
GEOM. MEAN :	1.4	19.9	******	4.5	0.0316	0.0642	1.45
GEOM. STD. DEV. :	6.3	2.2	******	1.1	3.5126	1.9561	2.82
1ST QUARTILE :	0.2	11.8	******	4.1	0.0185	0.0415	0.63
2ND QUARTILE :	1.6	20.1	******	4.4	0.0380	0.0598	1.38
3RD QUARTILE :	5.3	36.5	******	4.7	0.0669	0.1004	3.77
VOL. WGT. MEAN :	******	18.8	******	******	0.0377	0.0572	1.41

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	31	29	31	29	29	29	31
MAXIMUM :	2.900	0.790	1.037	0.080	0.335	0.550	2.400
MINIMUM :	0.020	0.000	0.000	0.000	0.000	0.000	0.010
RANGE :	2.880	0.790	1.037	0.080	0.335	0.550	2.390
ARITH. MEAN :	0.643	0.155	0.147	0.019	0.021	0.041	0.351
ARITH. STD. DEV :	0.674	0.207	0.192	0.020	0.062	0.103	0.517
GEOM. MEAN :	0.390	0.106	0.118	0.032	0.105	0.077	0.114
GEOM. STD. DEV. :	2.999	3.565	2.442	2.817	5.032	4.090	5.482
1ST QUARTILE :	0.195	0.020	0.040	0.005	0.000	0.000	0.022
2ND QUARTILE :	0.416	0.060	0.085	0.010	0.005	0.010	0.110
3RD QUARTILE :	0.905	0.225	0.185	0.025	0.017	0.030	0.555
VOL. WGT. MEAN :	0.385	0.076	0.065	0.010	0.008	0.011	0.184

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WELLESLEY/DAILY/AEROCHEM 804

PERIOD OF REPORT : JAN 3,86 TO DEC 25,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES	153	127	73	135	135	139	131
MAXIMUM	88.0	109.7	6.6	7.6	0.3090	0.4470	14.53
MINIMUM	0.1	3.8	3.7	3.5	0.0000	0.0120	0.30
RANGE	87.9	105.9	2.9	4.1	0.3090	0.4350	14.23
ARITH. MEAN	7.8	30.9	4.6	4.9	0.0479	0.0733	3.65
ARITH. STD. DEV	11.1	20.0	0.7	1.1	0.0554	0.0681	2.91
GEOM. MEAN	3.9	25.0	4.5	4.8	0.0120	0.0521	2.67
GEOM. STD. DEV.	3.5	2.0	1.1	1.2	11.9450	2.3007	2.32
1ST QUARTILE	1.6	16.3	4.2	4.2	0.0016	0.0224	1.67
2ND QUARTILE	4.3	25.3	4.3	4.4	0.0359	0.0565	2.88
3RD QUARTILE	8.5	40.9	4.6	5.8	0.0631	0.0915	4.68
VOL. WGT. MEAN	******	30.6	******	******	0.0491	0.0726	3.38

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES	131	115	170	115	115	116	124
MAXIMUM	3.951	3.050	1.190	0.450	0.150	0.230	3.100
MINIMUM	0.030	0.030	0.000	0.000	0.000	0.000	0.000
RANGE	3.921	3.020	1.190	0.450	0.150	0.230	3.100
ARITH. MEAN	0.710	0.577	0.229	0.071	0.031	0.059	0.626
ARITH. STD. DEV	0.556	0.603	0.209	0.083	0.030	0.055	0.562
GEOM. MEAN	0.533	0.351	0.164	0.046	0.030	0.046	0.449
GEOM. STD. DEV.	2.237	2.880	2.402	2.876	2.472	2.550	2.411
1ST QUARTILE	0.315	0.180	0.090	0.020	0.010	0.020	0.260
2ND QUARTILE	0.560	0.360	0.170	0.035	0.020	0.040	0.440
3RD QUARTILE	0.955	0.775	0.295	0.080	0.045	0.072	0.765
VOL. WGT. MEAN	0.549	0.423	0.166	0.058	0.026	0.041	0.487

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILMER/DAILY/AEROCHEM #9A

PERIOD OF REPORT : JAN 2,86 TO DEC 26,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES :	137	115	25	117	117	121	118
MAXIMUM :	44.0	82.2	5.8	7.2	0.4266	0.5350	13.50
MINIMUM :	0.2	4.1	3.8	3.4	0.0001	0.0116	0.15
RANGE :	43.8	78.1	1.9	3.8	0.4265	0.5234	13.35
ARITH. MEAN :	7.5	30.6	4.4	4.5	0.0673	0.0935	3.42
ARITH. STD. DEV :	9.0	19.3	0.5	0.7	0.0686	0.0844	2.79
GEOM. MEAN :	3.5	24.4	4.4	4.4	0.0333	0.0684	2.44
GEOM. STD. DEV. :	4.1	2.1	1.1	1.2	5.4871	2.2217	2.43
1ST QUARTILE :	1.4	14.0	4.1	4.1	0.0241	0.0423	1.35
2ND QUARTILE :	4.2	27.9	4.2	4.3	0.0457	0.0686	2.75
3RD QUARTILE :	9.5	41.7	4.5	4.6	0.0881	0.1140	4.35
VOL. WGT. MEAN :	******	28.4	******	******	0.0594	0.0835	2.96

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	119	108	121	110	112	112	119
MAXIMUM :	2.620	3.110	0.800	0.470	0.455	0.240	1.750
MINIMUM :	0.000	0.010	0.000	0.000	0.000	0.000	0.005
RANGE :	2.620	3.100	0.800	0.470	0.455	0.240	1.745
ARITH. MEAN :	0.655	0.498	0.180	0.041	0.049	0.059	0.357
ARITH. STD. DEV :	0.528	0.590	0.144	0.058	0.058	0.049	0.315
GEOM. MEAN :	0.478	0.249	0.137	0.031	0.045	0.049	0.222
GEOM. STD. DEV. :	2.421	3.588	2.235	2.771	2.323	2.377	3.121
1ST QUARTILE :	0.265	0.090	0.080	0.010	0.020	0.020	0.113
2ND QUARTILE :	0.530	0.250	0.138	0.025	0.035	0.050	0.272
3RD QUARTILE :	0.830	0.725	0.230	0.050	0.057	0.077	0.510
VOL. WGT. MEAN :	0.478	0.284	0.121	0.023	0.033	0.041	0.282

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

PART IV

SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY REGION

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CENTRAL REGION/DAILY PRECIPITATION

PERIOD OF REPORT : DEC 31,85 TO DEC 29,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES	674	572	419	576	576	589	575
MAXIMUM	95.0	229.9	7.0	7.4	0.4266	0.5659	19.00
MINIMUM	0.0	2.8	3.6	3.4	0.0000	0.0102	0.00
RANGE	95.0	227.1	3.4	4.0	0.4265	0.5557	19.00
ARITH. MEAN	6.1	30.7	4.4	4.5	0.0564	0.0813	2.75
ARITH. STD. DEV	9.1	22.4	0.4	0.7	0.0540	0.0638	2.39
GEOM. MEAN	2.5	23.5	4.4	4.5	0.0301	0.0626	1.85
GEOM. STD. DEV.	4.6	2.2	1.1	1.1	4.5100	2.0820	2.64
1ST QUARTILE	1.1	13.9	4.1	4.1	0.0175	0.0358	0.97
2ND QUARTILE	3.2	26.1	4.3	4.4	0.0407	0.0643	2.02
3RD QUARTILE	7.4	41.2	4.6	4.8	0.0813	0.1070	3.82
VOL. WGT. MEAN	######	23.1	######	######	0.0430	0.0643	2.16

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES	575	506	577	508	518	519	532
MAXIMUM	7.382	2.230	1.940	0.414	0.756	1.100	3.150
MINIMUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RANGE	7.382	2.230	1.940	0.414	0.756	1.100	3.150
ARITH. MEAN	0.674	0.301	0.193	0.041	0.044	0.072	0.404
ARITH. STD. DEV	0.605	0.344	0.203	0.057	0.059	0.102	0.458
GEOM. MEAN	0.449	0.174	0.146	0.033	0.043	0.047	0.218
GEOM. STD. DEV.	2.745	3.246	2.420	2.943	2.578	2.835	3.595
1ST QUARTILE	0.220	0.070	0.070	0.010	0.012	0.020	0.095
2ND QUARTILE	0.555	0.180	0.140	0.020	0.030	0.040	0.270
3RD QUARTILE	0.935	0.390	0.240	0.050	0.055	0.085	0.515
VOL. WGT. MEAN	0.426	0.176	0.106	0.024	0.025	0.037	0.281

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
: INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : DEC 29,85 TO DEC 30,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES :	246	172	0	160	160	171	172
MAXIMUM :	39.2	67.5	******	7.0	0.1175	0.1902	9.51
MINIMUM :	0.1	2.0	******	3.9	0.0001	0.0137	0.15
RANGE :	39.1	65.5	******	3.1	0.1174	0.1765	9.36
ARITH. MEAN :	6.4	11.7	******	5.2	0.0138	0.0334	1.25
ARITH. STD. DEV :	7.2	9.4	******	0.6	0.0160	0.0216	1.32
GEOM. MEAN :	2.6	9.6	******	5.1	0.0069	0.0295	0.88
GEOM. STD. DEV. :	5.4	1.8	******	1.1	4.1257	1.5828	2.27
1ST QUARTILE :	1.2	6.3	******	4.7	0.0031	0.0208	0.50
2ND QUARTILE :	3.8	8.9	******	5.0	0.0095	0.0279	0.90
3RD QUARTILE :	8.7	13.8	******	5.5	0.0193	0.0369	1.40
VOL. WGT. MEAN :	******	10.2	******	******	0.0119	0.0304	1.09

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	172	160	170	160	160	162	163
MAXIMUM :	1.697	1.939	0.770	0.311	0.900	0.590	1.650
MINIMUM :	0.000	0.010	0.000	0.000	0.000	0.005	0.000
RANGE :	1.697	1.929	0.770	0.311	0.900	0.585	1.650
ARITH. MEAN :	0.259	0.249	0.107	0.035	0.045	0.068	0.210
ARITH. STD. DEV :	0.224	0.261	0.108	0.041	0.098	0.076	0.231
GEOM. MEAN :	0.204	0.164	0.099	0.026	0.027	0.046	0.140
GEOM. STD. DEV. :	2.080	2.601	2.024	2.499	2.726	2.380	3.323
1ST QUARTILE :	0.130	0.100	0.050	0.010	0.010	0.025	0.055
2ND QUARTILE :	0.210	0.170	0.080	0.025	0.025	0.045	0.152
3RD QUARTILE :	0.330	0.320	0.120	0.040	0.045	0.085	0.270
VOL. WGT. MEAN :	0.219	0.206	0.072	0.026	0.029	0.044	0.231

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHEASTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : DEC 29,85 TO DEC 29,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES :	447	377	79	398	398	413	400
MAXIMUM :	58.8	100.0	6.1	7.3	0.5129	0.5650	19.75
MINIMUM :	0.1	4.0	3.6	3.3	0.0000	0.0116	0.10
RANGE :	58.7	96.0	2.5	4.0	0.5128	0.5534	19.65
ARITH. MEAN :	9.1	31.6	4.3	4.4	0.0732	0.0993	3.47
ARITH. STD. DEV :	10.3	19.9	0.5	0.7	0.0749	0.0860	2.93
GEOM. MEAN :	4.4	25.5	4.3	4.4	0.0394	0.0739	2.48
GEOM. STD. DEV. :	4.0	2.0	1.1	1.1	4.5085	2.1566	2.40
1ST QUARTILE :	1.8	16.1	4.1	4.0	0.0269	0.0447	1.45
2ND QUARTILE :	5.9	27.1	4.2	4.3	0.0501	0.0724	2.65
3RD QUARTILE :	12.1	42.7	4.5	4.6	0.0912	0.1195	4.55
VOL. WGT. MEAN :	******	29.7	******	******	0.0608	0.0866	2.93

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	398	369	402	374	379	378	393
MAXIMUM :	3.500	3.110	1.230	0.470	0.895	0.795	2.170
MINIMUM :	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RANGE :	3.500	3.110	1.230	0.470	0.895	0.795	2.170
ARITH. MEAN :	0.659	0.349	0.190	0.037	0.043	0.064	0.342
ARITH. STD. DEV :	0.554	0.426	0.181	0.051	0.074	0.076	0.311
GEOM. MEAN :	0.477	0.192	0.136	0.026	0.039	0.047	0.211
GEOM. STD. DEV. :	2.434	3.231	2.364	2.737	2.616	2.512	3.341
1ST QUARTILE :	0.270	0.080	0.070	0.010	0.010	0.025	0.120
2ND QUARTILE :	0.500	0.190	0.130	0.025	0.025	0.045	0.255
3RD QUARTILE :	0.860	0.460	0.230	0.045	0.050	0.075	0.470
VOL. WGT. MEAN :	0.468	0.209	0.118	0.024	0.028	0.041	0.274

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : JAN 1,86 TO DEC 26,86

	PRECIP. MM	CONDUCT. UMHO/CM	PH FIELD	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L
# OF SAMPLES :	591	505	286	514	514	537	521
MAXIMUM :	95.0	109.7	6.8	7.8	0.3090	0.4470	18.50
MINIMUM :	0.1	3.8	3.7	3.5	0.0000	0.0109	0.25
RANGE :	94.9	105.9	3.1	4.3	0.3090	0.4361	18.25
ARITH. MEAN :	7.1	31.8	4.6	4.8	0.0493	0.0748	3.79
ARITH. STD. DEV :	9.3	18.4	0.7	1.0	0.0505	0.0609	2.81
GEOM. MEAN :	3.7	26.7	4.5	4.7	0.0147	0.0554	2.87
GEOM. STD. DEV. :	3.4	1.8	1.1	1.2	11.0154	2.2210	2.21
1ST QUARTILE :	1.6	17.8	4.2	4.1	0.0086	0.0295	1.80
2ND QUARTILE :	4.1	27.6	4.4	4.4	0.0385	0.0611	3.10
3RD QUARTILE :	9.2	41.6	4.7	5.0	0.0700	0.0969	4.97
VOL. WGT. MEAN :	******	29.3	******	******	0.0488	0.0732	3.22

	NITRATE AS N MG/L	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	519	450	517	460	462	468	493
MAXIMUM :	3.951	4.180	2.270	1.070	0.533	0.975	3.100
MINIMUM :	0.020	0.000	0.000	0.000	0.000	0.000	0.000
RANGE :	3.931	4.180	2.270	1.070	0.533	0.975	3.100
ARITH. MEAN :	0.748	0.702	0.272	0.088	0.055	0.081	0.556
ARITH. STD. DEV :	0.546	0.760	0.256	0.111	0.065	0.098	0.493
GEOM. MEAN :	0.572	0.408	0.194	0.055	0.047	0.061	0.394
GEOM. STD. DEV. :	2.178	3.050	2.398	2.970	2.630	2.616	2.431
1ST QUARTILE :	0.360	0.190	0.110	0.025	0.015	0.030	0.225
2ND QUARTILE :	0.590	0.420	0.200	0.050	0.035	0.052	0.415
3RD QUARTILE :	1.015	0.935	0.340	0.108	0.070	0.100	0.720
VOL. WGT. MEAN :	0.540	0.442	0.174	0.057	0.036	0.052	0.422

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
***** : INSUFFICIENT DATA OR NOT APPLICABLE

PART V

SUMMARY STATISTICS OF WET DEPOSITION BY STATION

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BALSAM LAKE/DAILY/AEROCHEM #06

PERIOD OF REPORT : JAN 1, 86 TO DEC 25,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	152	106	136	142	135	135	120
MAXIMUM	93.1	3.8457	3.4275	4.6280	180.70	16.900	10.792
MINIMUM	0.1	0.0002	0.0000	0.0015	0.17	0.012	0.000
RANGE	93.0	3.8455	3.4275	4.6265	180.53	16.888	10.792
ARITH. MEAN	6.4	0.4715	0.3272	0.4562	16.61	3.128	1.594
ARITH. STD. DEV	10.1	0.6261	0.5146	0.6814	25.24	3.271	1.793
GEOM. MEAN	2.6	0.2506	0.0885	0.1794	7.14	1.712	0.940
GEOM. STD. DEV.	4.7	3.7350	11.5869	5.0810	4.06	3.699	3.026
1ST QUARTILE	1.2	0.1244	0.0434	0.0782	2.77	0.862	0.447
2ND QUARTILE	3.2	0.2692	0.1822	0.2684	7.86	1.998	0.915
3RD QUARTILE	9.0	0.5215	0.3824	0.5166	19.20	4.173	1.923
VOL. WGT. MEAN	*******	0.3503	0.3065	0.4437	15.38	2.896	1.383

	CHLORIDE MG/M**2	MAGNESIUM MG/M**2	POTASSIUM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	134	120	123	123	120
MAXIMUM	3.962	1.775	1.215	3.289	10.948
MINIMUM	0.000	0.000	0.000	0.000	0.000
RANGE	3.962	1.775	1.215	3.289	10.948
ARITH. MEAN	0.749	0.203	0.160	0.317	2.009
ARITH. STD. DEV	0.831	0.305	0.215	0.414	2.527
GEOM. MEAN	0.463	0.113	0.139	0.211	0.803
GEOM. STD. DEV.	2.983	3.526	3.116	2.728	5.005
1ST QUARTILE	0.214	0.032	0.030	0.100	0.274
2ND QUARTILE	0.415	0.097	0.077	0.182	0.941
3RD QUARTILE	0.904	0.255	0.201	0.426	2.805
VOL. WGT. MEAN	0.690	0.177	0.142	0.281	1.752

****** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

PERIOD OF REPORT : JAN 2, 86 TO DEC 25,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	132	23	119	124	119	117	108
MAXIMUM	58.8	1.3746	4.0680	12.4785	246.96	17.640	9.796
MINIMUM	0.2	0.0210	0.0001	0.0050	0.33	0.000	0.014
RANGE	58.6	1.3536	4.0679	12.4735	246.63	17.640	9.782
ARITH. MEAN	8.1	0.4923	0.5282	0.8040	23.52	3.715	1.718
ARITH. STD. DEV	10.1	0.3719	0.8152	1.5115	37.75	3.983	2.061
GEOM. MEAN	3.6	0.3407	0.1601	0.2917	9.55	2.042	0.845
GEOM. STD. DEV.	4.3	2.7803	8.0088	4.9276	4.19	3.477	3.759
1ST QUARTILE	1.4	0.1962	0.0713	0.1121	3.35	0.787	0.345
2ND QUARTILE	5.0	0.4357	0.2371	0.3740	9.94	2.622	0.930
3RD QUARTILE	10.3	0.6664	0.5362	0.7765	24.42	4.676	2.282
VOL. WGT. MEAN	*******	0.3602	0.4989	0.7869	22.14	3.440	1.484

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	116	110	112	111	114
MAXIMUM	5.292	1.768	3.311	5.083	17.640
MINIMUM	0.000	0.000	0.000	0.000	0.000
RANGE	5.292	1.768	3.311	5.083	17.640
ARITH. MEAN	0.984	0.172	0.190	0.334	1.580
ARITH. STD. DEV	1.093	0.264	0.420	0.597	2.464
GEOM. MEAN	0.573	0.097	0.122	0.193	0.545
GEOM. STD. DEV.	3.212	3.312	3.653	3.208	6.610
1ST QUARTILE	0.275	0.040	0.023	0.060	0.208
2ND QUARTILE	0.594	0.098	0.072	0.182	0.828
3RD QUARTILE	1.255	0.206	0.190	0.343	1.582
VOL. WGT. MEAN	0.906	0.151	0.169	0.296	1.436

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DAWSON/DAILY/AEROCHEM./6131

PERIOD OF REPORT : NOV 2, 86 TO DEC 8,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	10	0	4	4	4	4	4
MAXIMUM	39.2	********	2.1052	2.9557	84.28	19.600	3.136
MINIMUM	0.1	********	0.0187	0.1073	1.61	0.356	0.368
RANGE	39.1	********	2.0864	2.8484	82.67	19.244	2.768
ARITH. MEAN	8.6	********	0.5740	0.8730	24.65	6.047	1.556
ARITH. STD. DEV	11.1	********	1.0219	1.3912	39.90	9.122	1.231
GEOM. MEAN	4.3	********	0.1211	0.3319	8.04	2.166	1.160
GEOM. STD. DEV.	4.7	********	7.8693	4.6048	5.62	5.618	2.564
1ST QUARTILE	3.1	********	0.0303	0.1169	2.43	0.661	0.599
2ND QUARTILE	5.1	********	0.0861	0.2146	6.36	2.117	1.361
3RD QUARTILE	8.2	********	1.1177	1.6292	46.87	11.434	2.514
VOL. WGT. MEAN	*******	********	0.3488	0.5306	14.98	3.675	0.946

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	4	4	4	4	4
MAXIMUM	2.352	0.588	0.588	1.176	10.976
MINIMUM	0.276	0.069	0.092	0.207	0.030
RANGE	2.076	0.519	0.496	0.969	10.946
ARITH. MEAN	1.155	0.266	0.290	0.720	3.453
ARITH. STD. DEV	0.903	0.228	0.211	0.474	5.107
GEOM. MEAN	0.874	0.196	0.236	0.578	0.791
GEOM. STD. DEV.	2.503	2.469	2.144	2.273	12.376
1ST QUARTILE	0.482	0.109	0.153	0.318	0.279
2ND QUARTILE	0.996	0.203	0.241	0.748	1.404
3RD QUARTILE	1.828	0.423	0.427	1.121	6.627
VOL. WGT. MEAN	0.702	0.162	0.177	0.438	2.099

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/DAILY/AEROCHEM #08

PERIOD OF REPORT : JAN 1, 86 TO DEC 29,86

		PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	:	182	108	153	157	152	153	138
MAXIMUM	:	45.4	2.3992	2.0896	2.7300	128.00	17.343	12.288
MINIMUM	:	0.0	0.0032	0.0005	0.0057	0.48	0.000	0.000
RANGE	:	45.4	2.3960	2.0891	2.7243	127.52	17.343	12.288
ARITH. MEAN	:	5.9	0.4080	0.2668	0.4079	13.88	2.786	1.170
ARITH. STD. DEV	:	8.1	0.4171	0.3373	0.4713	19.66	2.805	1.783
GEOM. MEAN	:	2.4	0.2529	0.1276	0.2303	6.61	1.652	0.591
GEOM. STD. DEV.	:	4.9	2.9215	4.0907	3.1128	3.48	3.206	3.273
1ST QUARTILE	:	1.0	0.1209	0.0595	0.1093	2.80	0.823	0.246
2ND QUARTILE	:	2.8	0.2752	0.1431	0.2149	5.94	1.957	0.558
3RD QUARTILE	:	7.4	0.5604	0.3438	0.5611	18.76	3.831	1.119
VOL. WGT. MEAN	:	*******	0.2644	0.2289	0.3556	11.74	2.368	0.915

		CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	:	152	137	141	141	146
MAXIMUM	:	6.336	1.536	1.056	4.416	12.800
MINIMUM	:	0.000	0.000	0.000	0.000	0.000
RANGE	:	6.336	1.536	1.056	4.416	12.800
ARITH. MEAN	:	0.711	0.179	0.166	0.261	1.878
ARITH. STD. DEV	:	0.871	0.277	0.186	0.421	2.589
GEOM. MEAN	:	0.503	0.130	0.166	0.184	0.780
GEOM. STD. DEV.	:	2.470	3.182	2.699	2.433	4.531
1ST QUARTILE	:	0.208	0.024	0.039	0.078	0.257
2ND QUARTILE	:	0.468	0.080	0.097	0.156	0.900
3RD QUARTILE	:	0.857	0.165	0.223	0.287	2.391
VOL. WGT. MEAN	:	0.601	0.140	0.132	0.206	1.537

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY/AEROCHEM #16

PERIOD OF REPORT : FEB 7, 86 TO DEC 30,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	70	0	36	38	41	41	37
MAXIMUM	27.2	********	0.3813	0.5880	16.66	3.808	7.344
MINIMUM	0.1	********	0.0008	0.0033	0.04	0.000	0.026
RANGE	27.1	********	0.3805	0.5847	16.62	3.808	7.318
ARITH. MEAN	3.3	********	0.0469	0.1349	3.85	0.855	0.833
ARITH. STD. DEV	4.7	********	0.0706	0.1351	4.42	0.977	1.394
GEOM. MEAN	1.2	********	0.0220	0.0797	1.86	0.477	0.374
GEOM. STD. DEV.	5.3	********	3.8251	3.2827	3.96	3.551	3.683
1ST QUARTILE	0.2	********	0.0104	0.0465	0.88	0.283	0.172
2ND QUARTILE	1.8	********	0.0268	0.0951	1.70	0.526	0.391
3RD QUARTILE	3.9	********	0.0522	0.1565	4.30	0.864	0.905
VOL. MGT. MEAN	*******	********	0.0296	0.0890	2.72	0.605	0.552

	CHLORIDE MG/M**2	MAGNESIUM MG/M**2	POTASSIUM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	41	37	36	39	36
MAXIMUM	3.311	0.680	1.032	2.150	7.344
MINIMUM	0.000	0.000	0.000	0.007	0.000
RANGE	3.311	0.680	1.032	2.143	7.344
ARITH. MEAN	0.333	0.109	0.128	0.261	1.029
ARITH. STD. DEV	0.541	0.150	0.205	0.367	1.747
GEOM. MEAN	0.211	0.068	0.068	0.143	0.386
GEOM. STD. DEV.	3.217	3.353	3.723	3.159	5.669
1ST QUARTILE	0.076	0.025	0.016	0.072	0.062
2ND QUARTILE	0.194	0.050	0.051	0.133	0.217
3RD QUARTILE	0.355	0.103	0.172	0.263	0.894
VOL. MGT. MEAN	0.235	0.072	0.081	0.178	0.661

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FORBES TWSP/DAILY/AEROCHEM #13

PERIOD OF REPORT : JAN 13, 86 TO OCT 16,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	63	0	51	52	52	52	49
MAXIMUM	37.8	********	0.5177	0.9967	43.47	8.694	12.096
MINIMUM	0.1	********	0.0002	0.0185	0.50	0.100	0.120
RANGE	37.7	********	0.5175	0.9782	42.97	8.594	11.976
ARITH. MEAN	8.5	********	0.1086	0.2865	11.26	2.121	2.800
ARITH. STD. DEV	8.0	********	0.1228	0.2301	11.02	1.856	3.012
GEOM. MEAN	3.9	********	0.0436	0.2039	6.73	1.431	1.540
GEOM. STD. DEV.	5.5	********	5.6880	2.4418	3.02	2.603	3.242
1ST QUARTILE	2.5	********	0.0165	0.1172	2.80	0.695	0.550
2ND QUARTILE	5.6	********	0.0505	0.2033	7.24	1.404	1.556
3RD QUARTILE	13.1	********	0.1534	0.4006	16.72	3.144	3.796
VOL. WGT. MEAN	*******	********	0.0943	0.2526	9.93	1.870	2.389

	CHLORIDE MG/M**2	MAGNESIUM MG/M**2	POTASSIUM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	52	49	49	49	51
MAXIMUM	4.068	2.079	0.700	2.147	9.828
MINIMUM	0.000	0.000	0.000	0.034	0.000
RANGE	4.068	2.079	0.700	2.113	9.828
ARITH. MEAN	0.665	0.273	0.186	0.384	2.110
ARITH. STD. DEV	0.704	0.388	0.182	0.374	2.423
GEOM. MEAN	0.543	0.169	0.131	0.267	1.041
GEOM. STD. DEV.	2.323	2.822	2.511	2.462	4.175
1ST QUARTILE	0.219	0.072	0.066	0.174	0.410
2ND QUARTILE	0.438	0.112	0.106	0.290	0.811
3RD QUARTILE	0.938	0.293	0.235	0.407	3.765
VOL. WGT. MEAN	0.586	0.230	0.157	0.324	1.831

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY/AEROCHEM #12

PERIOD OF REPORT : JAN 2, 86 TO NOV 8,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	85	13	74	80	77	76	73
MAXIMUM	52.2	1.3319	5.1012	7.0470	292.32	23.490	14.442
MINIMUM	0.1	0.0662	0.0024	0.0072	0.66	0.112	0.090
RANGE	52.1	1.2657	5.0988	7.0398	291.66	23.378	14.352
ARITH. MEAN	10.7	0.4639	0.7161	0.9370	37.21	5.858	2.670
ARITH. STD. DEV	10.2	0.3636	0.8895	1.1238	45.14	5.122	2.922
GEOM. MEAN	6.0	0.3338	0.3344	0.5095	20.44	3.800	1.532
GEOM. STD. DEV.	3.7	2.4667	4.3253	3.4175	3.26	2.906	3.175
1ST QUARTILE	3.1	0.1647	0.1485	0.2506	9.48	2.413	0.732
2ND QUARTILE	7.8	0.3592	0.3890	0.5617	23.12	4.031	1.543
3RD QUARTILE	14.0	0.6166	0.7956	1.1879	49.64	7.848	3.696
VOL. WGT. MEAN	*******	0.7047	0.6745	0.8866	33.95	5.286	2.347

	CHLORIDE MG/M**2	MAGNESIUM MG/M**2	POTASSIUM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	77	74	74	74	76
MAXIMUM	9.396	3.484	3.393	2.610	21.924
MINIMUM	0.068	0.021	0.000	0.040	0.180
RANGE	9.328	3.463	3.393	2.570	21.744
ARITH. MEAN	1.406	0.386	0.378	0.572	3.848
ARITH. STD. DEV	1.378	0.555	0.525	0.522	3.848
GEOM. MEAN	0.922	0.203	0.234	0.406	2.328
GEOM. STD. DEV.	2.681	3.133	2.825	2.350	3.034
1ST QUARTILE	0.448	0.085	0.114	0.240	1.140
2ND QUARTILE	0.958	0.189	0.233	0.398	2.930
3RD QUARTILE	2.032	0.486	0.398	0.692	4.884
VOL. WGT. MEAN	1.283	0.340	0.333	0.504	3.509

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY/AEROCHEM 802

PERIOD OF REPORT : JAN 2, 86 TO DEC 25,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	144	76	127	140	136	134	114
MAXIMUM	45.2	3.2343	2.5502	3.6176	211.82	16.184	21.182
MINIMUM	0.2	0.0003	0.0000	0.0036	0.50	0.120	0.238
RANGE	45.0	3.2340	2.5502	3.6140	211.32	16.064	20.944
ARITH. MEAN	6.7	0.4310	0.3019	0.4446	21.56	3.584	4.900
ARITH. STD. DEV	7.5	0.5538	0.4262	0.5953	27.22	3.339	4.106
GEOM. MEAN	3.8	0.1537	0.0434	0.1827	12.03	2.324	3.325
GEOM. STD. DEV.	3.1	7.2491	22.2049	4.4202	3.21	2.784	2.641
1ST QUARTILE	1.6	0.0915	0.0055	0.0592	5.80	1.352	1.626
2ND QUARTILE	4.2	0.3202	0.1344	0.2075	14.01	2.446	4.083
3RD QUARTILE	9.2	0.5155	0.4049	0.6141	27.32	5.055	6.625
VOL. WGT. MEAN	*******	0.3001	0.2831	0.4401	20.93	3.486	4.155

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	134	119	120	122	129
MAXIMUM	6.120	2.975	2.142	3.120	26.180
MINIMUM	0.078	0.000	0.000	0.000	0.064
RANGE	6.042	2.975	2.142	3.120	26.116
ARITH. MEAN	1.274	0.397	0.350	0.468	2.774
ARITH. STD. DEV	1.165	0.459	0.312	0.572	3.510
GEOM. MEAN	0.896	0.269	0.267	0.322	1.575
GEOM. STD. DEV.	2.371	2.487	2.243	2.418	3.128
1ST QUARTILE	0.483	0.117	0.154	0.146	0.882
2ND QUARTILE	0.904	0.266	0.261	0.258	1.726
3RD QUARTILE	1.640	0.490	0.458	0.551	3.069
VOL. WGT. MEAN	1.221	0.349	0.307	0.414	2.575

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY/AEROCHEM #01

PERIOD OF REPORT : JAN 2, 86 TO DEC 25,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	144	69	120	124	121	121	103
MAXIMUM	28.5	2.8023	2.2260	2.9106	148.61	15.478	16.254
MINIMUM	0.1	0.0003	0.0000	0.0123	0.52	0.198	0.134
RANGE	28.4	2.8020	2.2259	2.8983	148.09	15.280	16.120
ARITH. MEAN	6.1	0.4301	0.3478	0.5087	22.24	3.848	3.488
ARITH. STD. DEV	6.3	0.4559	0.4089	0.5454	21.77	3.093	2.906
GEOM. MEAN	3.4	0.2200	0.0817	0.2563	14.54	2.763	2.320
GEOM. STD. DEV.	3.3	5.1424	15.5473	3.8199	2.75	2.416	2.764
1ST QUARTILE	1.4	0.1499	0.0526	0.0897	8.60	1.572	1.212
2ND QUARTILE	4.0	0.3405	0.2280	0.3718	15.62	2.910	2.652
3RD QUARTILE	8.2	0.4626	0.4776	0.7022	29.06	5.000	5.227
VOL. WGT. MEAN	*******	0.3000	0.3149	0.4655	19.95	3.451	2.825

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	120	106	107	109	114
MAXIMUM	6.806	3.570	5.917	4.875	15.260
MINIMUM	0.000	0.000	0.000	0.000	0.000
RANGE	6.806	3.570	5.917	4.875	15.260
ARITH. MEAN	1.347	0.396	0.395	0.490	2.767
ARITH. STD. DEV	1.219	0.452	0.686	0.633	2.648
GEOM. MEAN	0.934	0.272	0.282	0.330	1.789
GEOM. STD. DEV.	2.483	2.704	2.573	2.551	2.812
1ST QUARTILE	0.536	0.114	0.096	0.137	0.870
2ND QUARTILE	0.892	0.271	0.226	0.274	2.019
3RD QUARTILE	1.991	0.522	0.390	0.594	3.939
VOL. WGT. MEAN	1.200	0.329	0.324	0.403	2.410

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NITHGROVE/DAILY/AEROCHEM #07

PERIOD OF REPORT : DEC 31, 85 TO DEC 26,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	156	107	144	146	144	144	127
MAXIMUM	51.0	2.6538	2.4203	2.8428	117.60	18.762	12.200
MINIMUM	0.0	0.0003	0.0001	0.0071	0.19	0.024	0.000
RANGE	51.0	2.6535	2.4202	2.8357	117.41	18.738	12.200
ARITH. MEAN	6.6	0.4331	0.2874	0.4380	15.26	3.129	1.313
ARITH. STD. DEV	8.5	0.4697	0.3674	0.5135	20.47	3.305	1.782
GEOM. MEAN	3.1	0.2351	0.1088	0.2385	7.17	1.792	0.697
GEOM. STD. DEV.	4.2	3.8822	6.4562	3.2485	3.76	3.374	3.230
1ST QUARTILE	1.6	0.1138	0.0536	0.1038	3.45	1.008	0.289
2ND QUARTILE	3.6	0.2635	0.1566	0.2446	6.60	2.077	0.650
3RD QUARTILE	7.5	0.5593	0.4350	0.6225	21.77	4.414	1.568
VOL. WGT. MEAN	*******	0.3170	0.2683	0.4105	14.15	2.901	1.101

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	144	129	131	131	136
MAXIMUM	6.100	1.680	1.344	4.758	13.570
MINIMUM	0.000	0.000	0.000	0.000	0.007
RANGE	6.100	1.680	1.344	4.758	13.563
ARITH. MEAN	0.794	0.198	0.264	0.284	2.382
ARITH. STD. DEV	0.956	0.283	0.251	0.470	2.915
GEOM. MEAN	0.535	0.127	0.194	0.198	1.163
GEOM. STD. DEV.	2.616	3.134	2.320	2.322	3.918
1ST QUARTILE	0.241	0.036	0.104	0.093	0.531
2ND QUARTILE	0.525	0.084	0.186	0.182	1.334
3RD QUARTILE	0.980	0.240	0.320	0.271	2.831
VOL. WGT. MEAN	0.736	0.167	0.226	0.243	2.107

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM 803

PERIOD OF REPORT : JAN 1, 86 TO DEC 26,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES :	150	68	132	134	133	133	118
MAXIMUM :	95.0	6.5724	5.4667	7.9040	342.00	34.750	20.900
MINIMUM :	0.1	0.0005	0.0000	0.0051	0.42	0.096	0.000
RANGE :	94.9	6.5719	5.4667	7.8989	341.58	34.654	20.900
ARITH. MEAN :	7.8	0.6339	0.4438	0.6563	26.71	4.531	2.821
ARITH. STD. DEV :	11.0	1.0522	0.7276	1.0102	40.75	5.162	3.109
GEOM. MEAN :	3.8	0.2244	0.0891	0.2901	12.62	2.704	1.645
GEOM. STD. DEV. :	3.7	7.0259	16.9699	4.1953	3.72	3.071	3.060
1ST QUARTILE :	1.5	0.1288	0.0529	0.1084	6.00	1.623	0.622
2ND QUARTILE :	4.6	0.3804	0.2303	0.3736	12.88	3.072	1.642
3RD QUARTILE :	9.9	0.6278	0.5250	0.7786	30.39	5.760	4.274
VOL. WGT. MEAN :	*******	0.4272	0.4025	0.6028	24.12	4.092	2.329

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES :	133	120	120	121	126
MAXIMUM :	8.857	4.750	2.850	4.428	31.350
MINIMUM :	0.000	0.000	0.000	0.000	0.036
RANGE :	8.857	4.750	2.850	4.428	31.314
ARITH. MEAN :	1.351	0.568	0.258	0.411	3.637
ARITH. STD. DEV :	1.512	0.674	0.356	0.563	4.350
GEOM. MEAN :	0.863	0.321	0.199	0.278	1.965
GEOM. STD. DEV. :	2.653	3.311	2.862	2.749	3.328
1ST QUARTILE :	0.407	0.126	0.055	0.109	0.918
2ND QUARTILE :	0.852	0.336	0.154	0.181	2.062
3RD QUARTILE :	1.704	0.828	0.343	0.574	4.546
VOL. WGT. MEAN :	1.221	0.474	0.212	0.341	3.141

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

PERIOD OF REPORT : JAN 1, 86 TO DEC 26,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES :	103	0	69	77	75	75	70
MAXIMUM :	25.0	********	0.5383	0.9790	55.00	9.500	7.000
MINIMUM :	0.1	********	0.0004	0.0143	0.50	0.000	0.088
RANGE :	24.9	********	0.5379	0.9647	54.50	9.500	6.912
ARITH. MEAN :	6.9	********	0.0918	0.2356	8.71	1.730	1.452
ARITH. STD. DEV :	7.1	********	0.1166	0.2288	10.19	1.828	1.551
GEOM. MEAN :	3.3	********	0.0365	0.1486	4.57	1.064	0.845
GEOM. STD. DEV. :	4.7	********	5.1876	2.7516	3.38	2.849	2.996
1ST QUARTILE :	1.6	********	0.0157	0.0707	1.64	0.417	0.340
2ND QUARTILE :	4.0	********	0.0386	0.1386	4.41	0.952	0.890
3RD QUARTILE :	9.3	********	0.1242	0.3366	12.04	2.450	1.902
VOL. WGT. MEAN :	*******	********	0.0754	0.2025	7.33	1.457	1.156

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES :	73	70	71	70	72
MAXIMUM :	3.430	1.125	3.780	2.695	19.500
MINIMUM :	0.000	0.000	0.000	0.040	0.000
RANGE :	3.430	1.125	3.780	2.655	19.500
ARITH. MEAN :	0.621	0.227	0.342	0.393	2.117
ARITH. STD. DEV :	0.558	0.239	0.532	0.395	3.418
GEOM. MEAN :	0.477	0.143	0.197	0.281	0.764
GEOM. STD. DEV. :	2.269	2.819	3.096	2.261	5.131
1ST QUARTILE :	0.282	0.054	0.064	0.153	0.175
2ND QUARTILE :	0.432	0.137	0.223	0.255	0.884
3RD QUARTILE :	0.762	0.270	0.369	0.485	2.644
VOL. WGT. MEAN :	0.513	0.182	0.275	0.312	1.746

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAILTON/DAILY/AEROCHEM 810

PERIOD OF REPORT : DEC 29, 85 TO DEC 25,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	93	18	88	88	86	86	80
MAXIMUM	54.2	1.2680	3.7771	5.1761	207.20	29.120	11.160
MINIMUM	0.5	0.0134	0.0001	0.0137	0.80	0.072	0.000
RANGE	53.7	1.2546	3.7770	5.1624	206.40	29.048	11.160
ARITH. MEAN	11.3	0.6721	0.6926	0.9644	34.54	5.677	1.911
ARITH. STD. DEV	11.7	0.3127	0.8074	1.0588	41.03	5.281	2.151
GEOM. MEAN	6.3	0.5295	0.2621	0.4944	17.36	3.115	1.122
GEOM. STD. DEV.	3.3	2.7327	7.2335	3.7996	3.62	3.858	3.173
1ST QUARTILE	2.6	0.4796	0.1104	0.2069	6.38	1.622	0.477
2ND QUARTILE	7.5	0.6480	0.4548	0.6891	19.20	4.426	1.257
3RD QUARTILE	15.4	0.8647	0.9808	1.2514	44.75	7.926	2.447
VOL. WGT. MEAN	*******	0.5638	0.6703	0.9306	32.77	5.386	1.704

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	88	80	81	81	84
MAXIMUM	5.392	2.400	1.617	3.033	17.344
MINIMUM	0.000	0.000	0.000	0.000	0.047
RANGE	5.392	2.400	1.817	3.033	17.297
ARITH. MEAN	1.408	0.280	0.353	0.504	3.844
ARITH. STD. DEV	1.249	0.375	0.390	0.567	4.195
GEOM. MEAN	0.882	0.187	0.260	0.306	1.956
GEOM. STD. DEV.	3.020	3.090	3.041	2.925	3.766
1ST QUARTILE	0.423	0.057	0.068	0.148	0.835
2ND QUARTILE	1.153	0.175	0.206	0.277	2.212
3RD QUARTILE	2.073	0.327	0.492	0.605	5.435
VOL. WGT. MEAN	1.362	0.250	0.318	0.454	3.568

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY/AEROCHEM #05

PERIOD OF REPORT : JAN 1, 86 TO DEC 29,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	184	98	143	144	144	143	121
MAXIMUM	95.0	3.1800	2.7696	3.7620	149.60	14.500	10.528
MINIMUM	0.1	0.0020	0.0000	0.0019	0.00	0.026	0.000
RANGE	94.9	3.1779	2.7696	3.7601	149.60	14.474	10.528
ARITH. MEAN	5.8	0.4992	0.3263	0.4729	15.43	2.984	1.440
ARITH. STD. DEV	9.8	0.5626	0.4531	0.6035	21.87	3.048	1.629
GEOM. MEAN	2.2	0.2788	0.1062	0.2313	6.53	1.537	0.850
GEOM. STD. DEV.	4.6	3.5944	7.5141	3.8168	4.30	4.013	3.096
1ST QUARTILE	0.8	0.1535	0.0374	0.0923	2.17	0.653	0.378
2ND QUARTILE	2.8	0.3481	0.1717	0.2929	7.63	2.125	0.905
3RD QUARTILE	7.0	0.5718	0.4099	0.5991	18.03	4.336	1.777
VOL. WGT. MEAN	*******	0.2953	0.2628	0.3816	12.46	2.392	0.998

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	147	122	123	124	130
MAXIMUM	4.280	1.692	1.425	2.170	10.560
MINIMUM	0.000	0.000	0.000	0.000	0.003
RANGE	4.280	1.692	1.425	2.170	10.557
ARITH. MEAN	0.725	0.179	0.175	0.277	2.120
ARITH. STD. DEV	0.747	0.254	0.208	0.347	2.494
GEOM. MEAN	0.456	0.119	0.134	0.180	0.862
GEOM. STD. DEV.	2.996	3.244	2.852	2.633	5.320
1ST QUARTILE	0.225	0.040	0.056	0.096	0.360
2ND QUARTILE	0.488	0.090	0.110	0.173	1.120
3RD QUARTILE	0.929	0.215	0.192	0.320	2.905
VOL. WGT. MEAN	0.593	0.125	0.123	0.196	1.571

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SUTTON/DAILY/AEROCHEM./7011

PERIOD OF REPORT : OCT 8, 86 TO DEC 31,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	46	0	31	31	31	31	29
MAXIMUM	28.3	********	0.9400	1.2784	40.73	10.152	4.344
MINIMUM	0.1	********	0.0009	0.0146	0.40	0.070	0.000
RANGE	28.2	********	0.9391	1.2638	40.32	10.082	4.344
ARITH. MEAN	5.2	********	0.2833	0.4296	10.62	2.891	0.607
ARITH. STD. DEV	7.4	********	0.2788	0.3915	11.38	2.781	0.870
GEOM. MEAN	1.4	********	0.1200	0.2439	5.52	1.481	0.368
GEOM. STD. DEV.	6.3	********	5.9599	3.4480	3.57	4.028	3.587
1ST QUARTILE	0.2	********	0.0540	0.0956	2.02	0.572	0.068
2ND QUARTILE	1.6	********	0.1854	0.2336	4.99	1.574	0.285
3RD QUARTILE	5.3	********	0.4862	0.6599	16.88	4.899	0.829
VOL. WGT. MEAN	*******	********	0.1944	0.2948	7.29	1.984	0.390

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	31	29	29	29	31
MAXIMUM	1.890	0.362	0.272	0.504	6.697
MINIMUM	0.000	0.000	0.000	0.000	0.010
RANGE	1.890	0.362	0.272	0.504	6.687
ARITH. MEAN	0.491	0.081	0.063	0.087	1.384
ARITH. STD. DEV	0.482	0.085	0.091	0.126	1.863
GEOM. MEAN	0.375	0.099	0.209	0.165	0.432
GEOM. STD. DEV.	2.560	3.063	4.380	3.204	6.057
1ST QUARTILE	0.161	0.010	0.000	0.000	0.118
2ND QUARTILE	0.312	0.055	0.004	0.044	0.430
3RD QUARTILE	0.594	0.133	0.088	0.114	2.013
VOL. WGT. MEAN	0.337	0.052	0.041	0.056	0.950

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WELLESLEY/DAILY/AEROCHEM #04

PERIOD OF REPORT : JAN 3, 86 TO DEC 25,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES :	153	73	135	139	131	131	115
MAXIMUM :	88.0	5.6818	4.6183	6.9872	550.00	78.320	102.080
MINIMUM :	0.1	0.0005	0.0000	0.0100	0.24	0.070	0.042
RANGE :	87.9	5.6812	4.6183	6.9772	549.76	78.250	102.038
ARITH. MEAN :	7.8	0.6221	0.4222	0.6149	29.90	4.861	4.121
ARITH. STD. DEV :	11.1	0.9123	0.6654	0.9314	55.71	7.601	9.720
GEOM. MEAN :	3.9	0.2371	0.0569	0.2463	13.82	2.762	2.076
GEOM. STD. DEV. :	3.5	6.8637	22.0545	4.5087	3.74	3.171	3.259
1ST QUARTILE :	1.6	0.1289	0.0076	0.0640	6.38	1.549	1.173
2ND QUARTILE :	4.3	0.3662	0.1924	0.2876	15.05	3.191	2.298
3RD QUARTILE :	8.5	0.6841	0.5880	0.8462	32.56	5.690	4.836
VOL. WGT. MEAN :	*******	0.4045	0.3836	0.5674	26.39	4.290	3.310

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES :	130	115	115	116	124
MAXIMUM :	18.480	15.840	5.280	4.751	92.400
MINIMUM :	0.000	0.000	0.000	0.000	0.000
RANGE :	18.480	15.840	5.280	4.751	92.400
ARITH. MEAN :	1.480	0.563	0.253	0.402	4.498
ARITH. STD. DEV :	2.272	1.532	0.549	0.591	8.798
GEOM. MEAN :	0.838	0.253	0.153	0.249	2.468
GEOM. STD. DEV. :	2.920	3.438	3.082	2.786	3.054
1ST QUARTILE :	0.424	0.101	0.050	0.104	1.485
2ND QUARTILE :	0.854	0.200	0.127	0.211	2.346
3RD QUARTILE :	1.673	0.567	0.258	0.495	5.360
VOL. WGT. MEAN :	1.301	0.452	0.203	0.323	3.806

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILMER/DAILY/AEROCHEM 89A

PERIOD OF REPORT : JAN 2, 86 TO DEC 26,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES :	137	25	117	121	118	119	108
MAXIMUM :	44.0	2.2313	5.6219	7.0048	284.57	28.258	20.800
MINIMUM :	0.2	0.0060	0.0001	0.0096	0.21	0.000	0.096
RANGE :	43.8	2.2253	5.6218	6.9952	284.36	28.258	20.704
ARITH. MEAN :	7.5	0.5546	0.5047	0.7057	25.42	4.108	2.642
ARITH. STD. DEV :	9.0	0.4934	0.7137	0.9483	35.79	4.210	3.029
GEOM. MEAN :	3.5	0.3032	0.1559	0.3230	11.89	2.314	1.423
GEOM. STD. DEV. :	4.1	4.4757	9.3025	4.0999	3.87	3.428	3.347
1ST QUARTILE :	1.4	0.2052	0.0734	0.1319	5.22	0.899	0.524
2ND QUARTILE :	4.2	0.4692	0.2577	0.4180	13.26	3.025	1.568
3RD QUARTILE :	9.5	0.6483	0.6059	0.9173	30.02	5.468	3.912
VOL. WGT. MEAN :	*******	0.4032	0.4475	0.6291	22.30	3.606	2.144

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES :	121	110	112	112	119
MAXIMUM :	6.368	1.416	2.912	3.250	21.293
MINIMUM :	0.000	0.000	0.000	0.000	0.018
RANGE :	6.368	1.416	2.912	3.250	21.275
ARITH. MEAN :	1.025	0.209	0.297	0.372	2.417
ARITH. STD. DEV :	0.994	0.251	0.438	0.489	3.067
GEOM. MEAN :	0.641	0.149	0.206	0.242	1.079
GEOM. STD. DEV. :	2.925	2.730	2.621	2.658	4.431
1ST QUARTILE :	0.290	0.048	0.071	0.093	0.431
2ND QUARTILE :	0.727	0.132	0.165	0.225	1.248
3RD QUARTILE :	1.412	0.276	0.309	0.427	3.391
VOL. WGT. MEAN :	0.914	0.172	0.247	0.309	2.128

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

PART VI

SUMMARY STATISTICS OF WET DEPOSITION BY REGION

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CENTRAL REGION/DAILY PRECIPITATION

PERIOD OF REPORT : DEC 31, 85 TO DEC 29,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	674	419	576	589	575	575	506
MAXIMUM	95.0	3.8457	3.4275	4.6280	180.70	18.762	12.288
MINIMUM	0.0	0.0002	0.0000	0.0015	0.00	0.000	0.000
RANGE	95.0	3.8455	3.4275	4.6265	180.70	18.762	12.288
ARITH. MEAN	6.1	0.4518	0.3009	0.4429	15.26	3.002	1.371
ARITH. STD. DEV	9.1	0.5231	0.4210	0.5696	21.79	3.102	1.752
GEOM. MEAN	2.5	0.2534	0.1075	0.2190	6.85	1.670	0.750
GEOM. STD. DEV.	4.6	3.5152	7.0603	3.7784	3.88	3.554	3.196
1ST QUARTILE	1.1	0.1277	0.0489	0.0979	2.84	0.838	0.329
2ND QUARTILE	3.2	0.2974	0.1623	0.2464	6.60	2.048	0.732
3RD QUARTILE	7.4	0.5660	0.3987	0.5909	19.20	4.278	1.725
VOL. WGT. MEAN	*******	0.3045	0.2645	0.3950	13.30	2.616	1.083

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	577	508	518	519	532
MAXIMUM	6.336	1.775	1.425	4.758	13.570
MINIMUM	0.000	0.000	0.000	0.000	0.000
RANGE	6.336	1.775	1.425	4.758	13.570
ARITH. MEAN	0.744	0.190	0.192	0.284	2.095
ARITH. STD. DEV	0.853	0.280	0.219	0.416	2.640
GEOM. MEAN	0.489	0.122	0.157	0.193	0.891
GEOM. STD. DEV.	2.757	3.252	2.781	2.521	4.683
1ST QUARTILE	0.224	0.034	0.054	0.090	0.366
2ND QUARTILE	0.495	0.084	0.120	0.175	1.019
3RD QUARTILE	0.915	0.223	0.244	0.315	2.710
VOL. WGT. MEAN	0.650	0.150	0.154	0.228	1.728

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : DEC 29, 85 TO DEC 30,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES :	246	0	160	171	172	172	160
MAXIMUM :	39.2	********	2.1052	2.9557	84.28	19.600	12.096
MINIMUM :	0.1	********	0.0002	0.0033	0.04	0.000	0.026
RANGE :	39.1	********	2.1049	2.9524	84.24	19.600	12.070
ARITH. MEAN :	6.4	********	0.0991	0.2436	8.69	1.740	1.724
ARITH. STD. DEV :	7.2	********	0.1942	0.3000	11.28	2.196	2.197
GEOM. MEAN :	2.6	********	0.0356	0.1452	4.20	0.977	0.848
GEOM. STD. DEV. :	5.4	********	5.1545	2.9604	3.74	3.215	3.557
1ST QUARTILE :	1.2	********	0.0152	0.0765	1.64	0.438	0.355
2ND QUARTILE :	3.8	********	0.0389	0.1485	4.30	0.971	0.862
3RD QUARTILE :	8.7	********	0.1242	0.3203	11.63	2.450	2.184
VOL. WGT. MEAN :	*******	********	0.0761	0.1938	6.97	1.395	1.313

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES :	170	160	160	162	163
MAXIMUM :	4.068	2.079	3.780	2.695	19.500
MINIMUM :	0.000	0.000	0.000	0.007	0.000
RANGE :	4.068	2.079	3.780	2.688	19.500
ARITH. MEAN :	0.578	0.215	0.245	0.366	1.907
ARITH. STD. DEV :	0.626	0.283	0.391	0.388	2.887
GEOM. MEAN :	0.414	0.128	0.137	0.239	0.725
GEOM. STD. DEV. :	2.727	3.108	3.284	2.651	5.202
1ST QUARTILE :	0.194	0.050	0.055	0.130	0.175
2ND QUARTILE :	0.384	0.109	0.118	0.246	0.720
3RD QUARTILE :	0.701	0.249	0.285	0.437	2.447
VOL. WGT. MEAN :	0.459	0.163	0.185	0.280	1.470

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHEASTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : DEC 29, 85 TO DEC 29,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES :	447	79	398	413	400	398	369
MAXIMUM :	58.8	2.2313	5.6219	12.4785	292.32	29.120	20.800
MINIMUM :	0.1	0.0060	0.0001	0.0050	0.21	0.000	0.000
RANGE :	58.7	2.2253	5.6218	12.4735	292.11	29.120	20.800
ARITH. MEAN :	9.1	0.5483	0.5926	0.8351	29.08	4.665	2.219
ARITH. STD. DEV :	10.3	0.4015	0.8021	1.1973	39.70	4.657	2.599
GEOM. MEAN :	4.4	0.3618	0.2031	0.3747	13.41	2.615	1.178
GEOM. STD. DEV. :	4.0	3.2336	7.5576	4.2082	3.90	3.489	3.457
1ST QUARTILE :	1.8	0.2435	0.0951	0.1674	5.46	1.115	0.486
2ND QUARTILE :	5.9	0.4988	0.3250	0.4904	15.96	3.619	1.323
3RD QUARTILE :	12.1	0.7631	0.6997	0.9811	35.28	6.123	3.112
VOL. WGT. MEAN :	*******	0.4646	0.5520	0.7866	26.66	4.250	1.899

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES :	402	374	379	378	393
MAXIMUM :	9.396	3.484	3.393	5.083	21.924
MINIMUM :	0.000	0.000	0.000	0.000	0.000
RANGE :	9.396	3.484	3.393	5.083	21.924
ARITH. MEAN :	1.170	0.248	0.293	0.428	2.756
ARITH. STD. DEV :	1.173	0.367	0.446	0.552	3.473
GEOM. MEAN :	0.713	0.147	0.190	0.263	1.166
GEOM. STD. DEV. :	3.025	3.160	3.215	2.925	5.055
1ST QUARTILE :	0.332	0.049	0.056	0.122	0.491
2ND QUARTILE :	0.782	0.141	0.144	0.257	1.419
3RD QUARTILE :	1.652	0.298	0.348	0.475	3.787
VOL. WGT. MEAN :	1.075	0.214	0.256	0.373	2.492

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : JAN 1, 86 TO DEC 26,86

	PRECIP. MM	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ GRAN MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	591	286	514	537	521	519	450
MAXIMUM	95.0	6.5724	5.4667	7.9040	550.00	78.320	102.080
MINIMUM	0.1	0.0003	0.0000	0.0036	0.24	0.070	0.000
RANGE	94.9	6.5721	5.4667	7.9004	549.76	78.250	102.080
ARITH. MEAN	7.1	0.5278	0.3806	0.5563	25.13	4.210	3.832
ARITH. STD. DEV	9.3	0.7814	0.5809	0.8024	38.87	5.161	5.768
GEOM. MEAN	3.7	0.2049	0.0650	0.2395	13.18	2.627	2.257
GEOM. STD. DEV.	3.4	6.5526	19.2180	4.2722	3.36	2.868	3.015
1ST QUARTILE	1.6	0.1262	0.0205	0.0732	6.45	1.526	1.173
2ND QUARTILE	4.1	0.3429	0.2070	0.2986	14.56	2.970	2.559
3RD QUARTILE	9.2	0.6203	0.4794	0.7267	29.93	5.414	5.245
VOL. WGT. MEAN	*******	0.3584	0.3472	0.5202	22.91	3.838	3.141

	CHLORIDE MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2
# OF SAMPLES	517	460	462	468	493
MAXIMUM	18.480	15.840	5.917	4.875	92.400
MINIMUM	0.000	0.000	0.000	0.000	0.000
RANGE	18.480	15.840	5.917	4.875	92.400
ARITH. MEAN	1.362	0.483	0.312	0.442	3.426
ARITH. STD. DEV	1.604	0.899	0.494	0.588	5.430
GEOM. MEAN	0.881	0.278	0.218	0.293	1.922
GEOM. STD. DEV.	2.603	2.989	2.779	2.637	3.115
1ST QUARTILE	0.468	0.110	0.083	0.123	1.053
2ND QUARTILE	0.881	0.273	0.200	0.241	2.041
3RD QUARTILE	1.776	0.586	0.370	0.555	4.132
VOL. WGT. MEAN	1.235	0.403	0.259	0.369	2.998

***** : INSUFFICIENT DATA
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

PART VII

SUMMARY STATISTICS OF AIR CONCENTRATION BY STATION, REGION

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AIR #11

PERIOD OF REPORT : JAN 7,86 TO DEC 31,86

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	NITRIC AS N UG/M**3	AMMONIUM AS N UG/M**3	NITRATE AS N UG/M**3	TOTL NO3 AS N UG/M**3
# OF SAMPLES :	303.0	306.00	305.00	296.000	305.00	304.00
MAXIMUM :	50.2	34.45	2.72	5.295	2.78	3.13
MINIMUM :	0.0	0.00	0.00	0.000	0.00	0.00
RANGE :	50.2	34.45	2.72	5.295	2.78	3.13
ARITH. MEAN :	2.5	3.54	0.39	0.995	0.19	0.58
ARITH. STD. DEV :	4.7	3.60	0.40	0.950	0.28	0.49
GEOM. MEAN :	1.4	2.27	0.27	0.639	0.11	0.40
GEOM. STD. DEV. :	2.9	2.74	2.75	3.057	3.38	2.60
1ST QUARTILE :	0.5	1.21	0.15	0.328	0.04	0.24
2ND QUARTILE :	1.2	2.32	0.26	0.630	0.10	0.41
3RD QUARTILE :	2.7	4.97	0.51	1.409	0.24	0.82

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/DAILY/AIR #08

PERIOD OF REPORT : JAN 1,86 TO DEC 31,86

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	NITRIC AS N UG/M**3	AMMONIUM AS N UG/M**3	NITRATE AS N UG/M**3	TOTL NO3 AS N UG/M**3
# OF SAMPLES :	343.0	343.00	343.00	343.000	343.00	342.00
MAXIMUM :	24.5	17.66	1.92	3.915	1.67	2.64
MINIMUM :	0.0	0.04	0.00	0.000	0.00	0.00
RANGE :	24.5	17.62	1.92	3.915	1.67	2.64
ARITH. MEAN :	2.6	3.18	0.31	0.762	0.09	0.40
ARITH. STD. DEV :	3.4	3.03	0.33	0.769	0.21	0.45
GEOM. MEAN :	1.6	2.06	0.18	0.477	0.12	0.22
GEOM. STD. DEV. :	2.8	2.76	3.24	2.770	4.05	3.12
1ST QUARTILE :	0.3	1.10	0.07	0.214	0.00	0.10
2ND QUARTILE :	1.3	2.19	0.16	0.472	0.02	0.19
3RD QUARTILE :	3.8	4.15	0.44	0.968	0.07	0.54

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY/AIR #16

PERIOD OF REPORT : JAN 1,86 TO DEC 31,86

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	NITRATE AS N UG/M**3	AMMONIUM AS N UG/M**3	NITRATE AS N UG/M**3	TOTL NO3 AS N UG/M**3
# OF SAMPLES :	340.0	354.00	354.00	354.000	354.00	354.00
MAXIMUM :	8.1	8.16	0.77	2.716	1.73	2.05
MINIMUM :	0.0	0.00	0.00	0.000	0.00	0.00
RANGE :	8.1	8.16	0.77	2.716	1.73	2.05
ARITH. MEAN :	0.5	1.35	0.11	0.343	0.04	0.15
ARITH. STD. DEV :	0.9	1.18	0.12	0.341	0.13	0.21
GEOM. MEAN :	0.7	1.03	0.08	0.213	0.10	0.10
GEOM. STD. DEV. :	2.5	2.26	2.75	3.605	4.54	2.86
1ST QUARTILE :	0.0	0.58	0.03	0.137	0.00	0.05
2ND QUARTILE :	0.2	1.04	0.07	0.231	0.01	0.08
3RD QUARTILE :	0.7	1.82	0.14	0.407	0.03	0.17

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF AMBIENT CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY/AIR #02

PERIOD OF REPORT : JAN 1,86 TO DEC 31,86

	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	NITRIC AS N UG/M**3	AMMONIUM AS N UG/M**3	NITRATE AS N UG/M**3	TOTL NO3 AS N UG/M**3
# OF SAMPLES :	363.0	363.00	363.00	355.000	363.00	363.00
MAXIMUM :	68.2	31.85	3.65	6.179	4.44	4.89
MINIMUM :	0.0	0.00	0.00	0.000	0.00	0.00
RANGE :	68.2	31.85	3.65	6.179	4.44	4.89
ARITH. MEAN :	7.2	5.66	0.58	1.769	0.57	1.15
ARITH. STD. DEV :	10.9	4.35	0.59	1.237	0.62	0.86
GEOM. MEAN :	3.4	4.14	0.36	1.291	0.37	0.84
GEOM. STD. DEV. :	3.6	2.35	3.05	2.469	3.00	2.47
1ST QUARTILE :	1.6	2.40	0.17	0.709	0.14	0.53
2ND QUARTILE :	3.6	4.50	0.40	1.520	0.38	0.95
3RD QUARTILE :	7.7	7.73	0.78	2.571	0.82	1.60